DISSERTATION ON

"A DESCRIPTIVE STUDY OF FAMILY BURDEN, COPING SKILLS AND PSYCHOLOGICAL WELLBEING AMONG CAREGIVERS OF PATIENTS WITH BIPOLAR DISORDER"

Dissertation submitted to

THE TAMILNADU DR. M.G.R. MEDICAL UNIVERSITY

In partial fulfillment of the regulations
for the award of the degree of

M.D. DEGREE IN PSYCHIATRY

BRANCH- XVIII

THANJAVUR MEDICAL COLLEGE,
THANJAVUR - 613 004

THE TAMILNADU DR. M.G.R. MEDICAL UNIVERSITY
CHENNAI - 600 032

APRIL – 2015

CERTIFICATE

This is to certify that this dissertation entitled **"A DESCRIPTIVE STUDY OF FAMILY BURDEN, COPING SKILLS AND PSYCHOLOGICAL WELLBEING AMONG CAREGIVERS OF PATIENTS WITH BIPOLAR DISORDER"** is the bonafide work of **Dr.N.PAKKIYALAKSHMI** in partial fulfillment of the requirements for M.D (Psychiatry) BRANCH –XVIII Examination of the Tamilnadu Dr. M.G.R. Medical University to be held in APRIL – 2015. The period of study was from January 2014 –June 2014

Dr. S.ILANGOVAN M.D.,
Professor & Head,
Department of Psychiatry,
Thanjavur Medical College,
Thanjavur - 4

Prof.Dr.K.MAHADEVAN, M.S.,
THE DEAN,
Thanjavur Medical College,
Thanjavur - 4.

DECLARATION

I, **Dr.N.PAKKIYALAKSHMI**, solemnly declare that the dissertation titled **"A DESCRIPTIVE STUDY OF FAMILY BURDEN, COPING SKILLS AND PSYCHOLOGICAL WELLBEING AMONG CAREGIVERS OF PATIENTS WITH BIPOLAR DISORDER"** is a bonafide work done by me at Thanjavur Medical College, Thanjavur during January 2014 –June 2014 under the guidance and supervision of **Dr. S.ILANGOVAN M.D.,** Professor & Head, Department of Psychiatry, Thanjavur Medical College, Thanjavur.

This dissertation is submitted to Tamilnadu Dr. M.G.R Medical University towards partial fulfillment of requirement for the award of **M.D. (Psychiatry) Branch –XVIII.**

Place: Thanjavur.

Date: (**Dr.N.PAKKIYALAKSHMI**)

ACKNOWLEDGEMENT

I thank **Prof. Dr. K.MAHADEVAN M.S.,** Dean, Thanjavur Medical College for permitting me to conduct this study.

I am extremely grateful to **Dr. S.ILANGOVAN M.D.,** (Psychiatry), Professor and Head, Department of Psychiatry, Thanjavur Medical College and Hospital for his kind hearted guidance, help and words of encouragement throughout the study.

I am thankful to **Dr.R.MURALITHARAN M.D.,** (Psychiatry), **Dr. G. ANBAZHAGAN, M.D, D.P.M., Dr. J. BABU BALASINGH, D.P.M., Dr.M.SRIDHAR M.D, D.P.M.,** Assistant Professors, Department of Psychiatry, Thanjavur Medical College for their valuable suggestions and guidance.

I also thank my colleagues for their help in conducting the study. I would like to thank my family members for their support and understanding during my study.

Finally, I would like to thank all the patients who co operated and participated in this study.

Thanjavur Medical College

THANJAVUR, TAMILNADU, INDIA-613 001

(Affiliated to the T.N.Dr.MGR Medical University, Chennai)

INSTITUTIONAL ETHICAL COMMITTEE

CERTIFICATE

Approval No. : 008

This is to certify that The Research Proposal / Project titled

A DESCRIPTIVE STUDY OF FAMILY BURDEN, COPING SKILLS AND PSYCHOLOGICAL WELLBEING AMONG CAREGIVERS OF PATIENTS WITH BIPOLAR AFFECTIVE DISORDER

submitted by Dr. N. PAKKIVALAKSHMI **of**

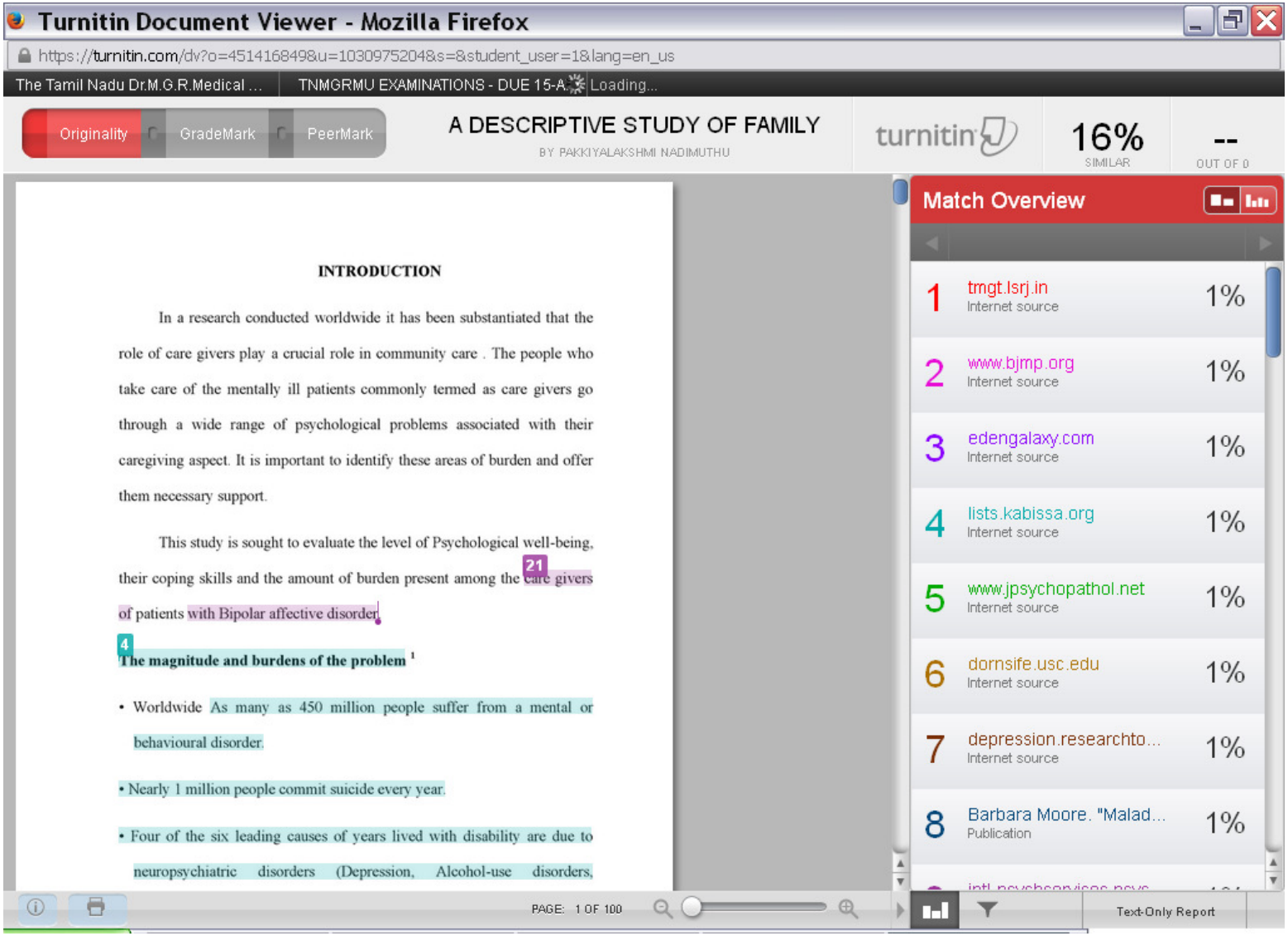
Dept. of PSYCHIATRY **Thanjavur Medical College, Thanjavur**

was approved by the Ethical Committee.

THANJAVUR MEDICAL COLLEGE THANJAVUR

Thanjavur
Dated : 06.12.2013

Secretary
Ethical Committee
TMC, Thanjavur.

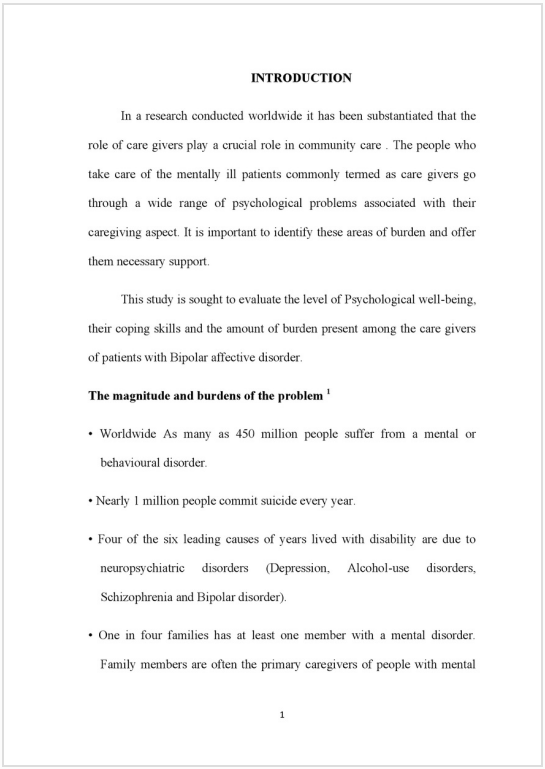

Turnitin Document Viewer - Mozilla Firefox
https://turnitin.com/dv?o=451416849&u=1030975204&s=&student_user=1&lang=en_us
The Tamil Nadu Dr.M.G.R.Medical ...
TNMGRMU EXAMINATIONS - DUE 15-A...
Loading...
Originality
GradeMark
PeerMark
A DESCRIPTIVE STUDY OF FAMILY
BY PAKKIYALAKSHMI NADIMUTHU
turnitin
16%
SIMILAR
--
OUT OF 0
INTRODUCTION
In a research conducted worldwide it has been substantiated that the role of care givers play a crucial role in community care . The people who take care of the mentally ill patients commonly termed as care givers go through a wide range of psychological problems associated with their caregiving aspect. It is important to identify these areas of burden and offer them necessary support.
This study is sought to evaluate the level of Psychological well-being, their coping skills and the amount of burden present among the care givers of patients with Bipolar affective disorder.
The magnitude and burdens of the problem [1]
• Worldwide As many as 450 million people suffer from a mental or behavioural disorder.
• Nearly 1 million people commit suicide every year.
• Four of the six leading causes of years lived with disability are due to neuropsychiatric disorders (Depression, Alcohol-use disorders,
PAGE: 1 OF 100
Match Overview
1 tmgt.lsrj.in Internet source 1%
2 www.bjmp.org Internet source 1%
3 edengalaxy.com Internet source 1%
4 lists.kabissa.org Internet source 1%
5 www.jpsychopathol.net Internet source 1%
6 dornsife.usc.edu Internet source 1%
7 depression.researchto... Internet source 1%
8 Barbara Moore. "Malad... Publication 1%
Text-Only Report

Digital Receipt

This receipt acknowledges that Turnitin received your paper. Below you will find the receipt information regarding your submission.

The first page of your submissions is displayed below.

Submission author:	Pakkiyalakshmi NADIMUTHU
Assignment title:	TNMGRMU EXAMINATIONS
Submission title:	A DESCRIPTIVE STUDY OF FAMILY..
File name:	3.DISSERTATION_2014.docx
File size:	510.44K
Page count:	100
Word count:	13,701
Character count:	78,990
Submission date:	23-Sep-2014 08:18PM
Submission ID:	451416849



INTRODUCTION

In a research conducted worldwide it has been substantiated that the role of care givers play a crucial role in community care . The people who take care of the mentally ill patients commonly termed as care givers go through a wide range of psychological problems associated with their caregiving aspect. It is important to identify these areas of burden and offer them necessary support.

This study is sought to evaluate the level of Psychological well-being, their coping skills and the amount of burden present among the care givers of patients with Bipolar affective disorder.

The magnitude and burdens of the problem [1]

- Worldwide As many as 450 million people suffer from a mental or behavioural disorder.
- Nearly 1 million people commit suicide every year.
- Four of the six leading causes of years lived with disability are due to neuropsychiatric disorders (Depression, Alcohol-use disorders, Schizophrenia and Bipolar disorder).
- One in four families has at least one member with a mental disorder. Family members are often the primary caregivers of people with mental

1

CONTENTS

ABBREVIATIONS

ICD - International Classification of Diseases

BPAD - Bipolar affective disorder

BAS - Burden assessment schedule

PGWBI - Psychological General Well Being Index

BD - Bipolar disorder

FB - Family burden

EE - Expressed emotions

ES- Emotional support

IS-Instrumental support

A DESCRIPTIVE STUDY OF FAMILY BURDEN ,COPING SKILLS AND PSYCHOLOGICAL WELL BEING AMONG CAREGIVERS OF PATIENTS WITH BIPOLAR DISORDER

ABSTRACT

BACKGROUND

Caregivers of people with Bipolar disorder may experience a different quality of burden than is seen with other illnesses. A better understanding of their concerns is necessary to improve the training of professionals working with this population.

AIM OF THE STUDY

To study the level of family burden, coping skills and psychological wellbeing among caregivers of Bipolar affective disorder.

METHODOLOGY

This is a descriptive study .Patients with a diagnosis of a mood disorder attending the outpatient department of psychiatry, Thanjavur Medical College along with their primary caregiver are taken up for the study. Socio -demographic factors of both caregivers and patients were collected using following questionnaires; Burden assessment schedule (BAS), psychological wellbeing index and brief cope scale .

RESULTS :. Higher score was recorded for physical and mental health. However male caregivers were using more problem solving and negative distraction and Female were using more denial and Religion as coping strategies.

CONCLUSION: significant levels of burden were found among caregivers and coping strategies utilized varied, based on caregiver demographic characteristics. Higher the perceived burden, lower was the psychological wellbeing.

KEY WORDS: BPAD, family burden, coping and Psychological well being

INTRODUCTION

In a research conducted worldwide it has been substantiated that the role of care givers play a crucial role in community care . The people who take care of the mentally ill patients commonly termed as care givers go through a wide range of psychological problems associated with their caregiving aspect. It is important to identify these areas of burden and offer them necessary support.

This study is sought to evaluate the level of Psychological well-being, their coping skills and the amount of burden present among the care givers of patients with Bipolar affective disorder.

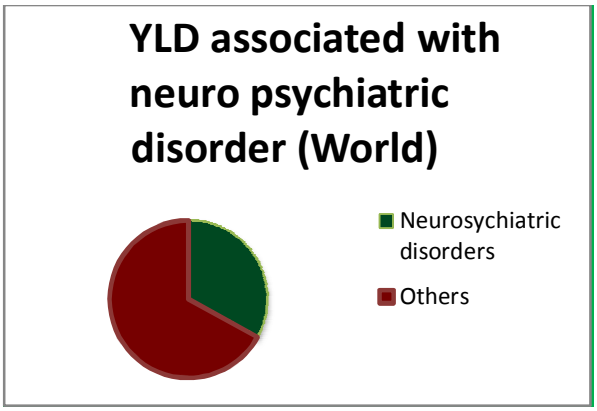
The magnitude and burdens of the problem [1]

- Worldwide As many as 450 million people suffer from a mental or behavioural disorder.
- Nearly 1 million people commit suicide every year.
- Four of the six leading causes of years lived with disability are due to neuropsychiatric disorders (Depression, Alcohol-use disorders, Schizophrenia and Bipolar disorder).
- One in four families has at least one member with a mental disorder. Family members are often the primary caregivers of people with mental

disorders. The extent of the burden of mental disorders on family members is difficult to assess and quantify, and is consequently often ignored. However, it does have a significant impact on the family's quality of life.

- In addition to the health and social costs, those suffering from mental illnesses are also victims of human rights violations, stigma and discrimination, both inside and outside psychiatric institutions.

As per WHO 2001 statistics about 450 million people suffer from a mental or behavioural disorder. Of which 33% of the years lived with disability (YLD) are due to neuropsychiatric disorders.



Economic Burden

Even with advent of new medications to treat Bipolar disorder, Bipolar patients still continue to experience disability, functional deterioration, and diminished quality of life, increased mortality from comorbid medical conditions or suicide andincreased service utilization. As

per recent economic study the amount spent on bipolar patients ranged from $24 billion to $40 billion in their entire life , it includes lost wages, caregiver costs, hospitalization costs. If a patient was diagnosed as bipolar affective disorder in his 20s and left untreated, he would miss an estimated loss of 12 years of good health, 14 years of work income, and a life expectancy is shortened by 9 years.[2]

Generally, the course of illness in BPAD patients is cyclicalin nature, which poses unique challenges and barriers to them. They often find that their fluctuations in mood significantly disrupt their ability to function in social circumstances and, most importantly, to hold on to a job. Patients may frequently need to take days off from their work either due to worsening of clinical symptoms or hospitalization. Even if they are working they are liable to get problems owing to their fluctuating mood episodes such as reduced concentration , lack of motivation during depression or, inappropriate behaviors during mania. As a result, Bipolar patients suffer decline in their level of employment.[2]

Morbidity due to the recurrent nature of the illness, often exacerbated by co-existing medical conditions, has an undoubtedly large economic impact on individuals with the illness, their families, the health system and wider society.[3] Manic episodes of the illness were more disruptive to daily activities , work and family relationships.[4] During the acute phase of the

illness great demand may be placed on care givers. Such demands may persist even during remission, where residual symptoms may still be present demanding family care giving.[4; 5]Bipolar disorder has direct and indirect costs resulting in economic and family caregiver burden.

PREVALENCE OF BIPOLAR AFFECTIVE DISORDER

The current prevalence of Bipolar Affective Disorder (BPAD) is 0.4-0.5%, 1-year prevalence is 0.5-1.4% and life time prevalence is 2.6 – 7.8 %.

IN INDIA

India contributes one sixth of the total world mentally ill population. Studies conducted in different parts of India showed the prevalence rate of Schizophrenia was 0.7- 5.5/1000 and that for Bipolar affective disorder was 0.7- 15.0/1000 (Reddy & Chandrashekar, 1998)[6]. In India, Families playa major role in caregiving aspect of psychiatric illness and caregivers of patients with BPAD had experience significant burden .

Coping strategy of the care giver is highly significant which that determinestheir socio-cultural and financial status and alsoplays a significant role in the improvement of symptoms. Thus, in last few decades, burden and coping strategies in caregivers of mentally ill patients was an important aspect of concern of all psychiatrists and social researchers.

1.9% of the Indian population was disabled as per 1991 statistics of the National Sample Survey Organization (NSSO).[7] Psychiatric disorders account nearly about 31%of world's disability. Five of the 10 leading causes of disability are in the category of mental disorders: Major depression, Alcohol use, Bipolar affective disorder, Schizophrenia and Obsessive-compulsive disorder. These disorders have negative impact on the various aspects of functioning like educational, occupational, social and familial functioning of the patients. Global burden of disease identified BPAD as the sixth leading cause of disability during middle years of life.[8]

Disabilities associated with BPAD were as follows, increased suicidal behavior, joblessness, and dependence on external support, lower income, and reduced work efficiency and overall reduced life expectancy.[9]

Chaudhury et al found that patients having BPAD were disabled in the following cores of functioning: self-care, interpersonal relations, communication & understanding and work.[10]

In this background, the present study is planned to assess the level of caregiver's burden, coping styles and impact of family burden on psychological wellbeing.

AIM AND OBJECTIVES

1.To evaluate family burden among care givers of BPAD patients.

2.To assess the patterns of coping among care givers of patients with BPAD

3.To examine the psychological wellbeing of care givers of BPAD.

4.To explore the association between care giver burden, coping styles and subjective wellbeing.

REVIEW OF LITERATURE

BURDEN IN BIPOLAR AFFECTIVE DISORDERS

By the year 2020 BPAD will represent the sixth leading cause of disability worldwide. [11-13] BPAD has a significant impact on social functioning and quality of life of not only the patients but also their family members. [14]

Even with regular drug compliance the illness is highly recurrentand thePatients experiencing at least one relapse within two years of their illness onset.[15] Patients experience impairments in multiple domains in their life, even when they are free of symptoms.[16-20] Increased Suicide risk in BPAD patients (15 times higher) than in general population. [21-22]and mortality rates due to suicide was about 15-20% [23]; and around 50% of patients attempt suicide at least once in their life.[24]

A study carried out in caregivers of BPAD patients revealed that there is a major concern for the patient's behaviour and alsofor their reduced quality of life.[25]

FAMILY BURDEN

The term 'Family burden' has been assumed to identify the objective and subjective burden experienced by caregivers of mentally ill patients.[26]

Caregivers burden refers to the effect of stressors on the relatives caring for mentally ill patients.

Objective and subjective dimensions of burden were first distinguished by the researchers Hoeing and Hamilton.

OBJECTIVE BURDEN

Objective burden refers to the practical difficulties of the caregivers of mentally ill patients which includes break in family relationships, limitations in social work, financial difficulties, and adverse effect on their own physical health.

SUBJECTIVE BURDEN

Psychological experience of the caregivers were described by Subjective burden. Such as sadness, anxiety and embarrassment in social situations, the stress of coping with troubling behaviours.[27]

FAMILY BURDEN IN INDIAN CONTEXT

Families In India were highly inter dependent and there is a major concern for each and every members of the family. Hence there is a high involvement of family members in treating their mentally ill relatives. Dr. Vidya Sagar, the superintendent of Amritsar Mental Hospital, involved the family members in treating the mentally ill patients. Heallowedthe relatives to stay with the patients and he observed a gross improvement in their recovery.

A study observed by Bhaskaran showed that around 75% of the mentally ill patients had no contact with any of their relatives.[28] The reason which he reported was strong stigma prevailing in our society, chronicity of illness and the reduced working capacity of the patient .

Another observation by Gupta et al among patients in the Agra Mental Hospital showed that more than half of them did not have a single visit from their family members in the past two years.[29] Many surveys from various mental hospitals also shows that majority of chronic patients have no contact with their family members.[30]

CAREGIVER BURDEN

Caregivers play an important role in the management of all the chronic mental illnesses. They may be family members, friends or relatives of the patient. Literature review indicates that caregivers who persistently

deal with the patients of chronic mental illness show signs of stress in various forms. Care giving is a time-consuming responsibility, creating social, emotional, behavioral and financial problems for the caregivers and causes various limitations on their personal life.

Burden may be defined as the presence of problems, difficulties or adverse effects which affect the lives of psychiatric patients' caregivers.[31]

The World Health Organization (WHO) states caregiver burden as "The emotional, physical, financial demands and responsibilities of an individual's illness that are placed on the family members, friends or other individuals involved with the individual outside the health care system.[32]

Caregivers with high levels of family burden report a high number of physical problems, depressive symptoms, high risky behaviours, frequent referral to health agencies and less support from the social network.

Caring for someone with a mental disorder can affect the dynamics of a family. It takes up most of the caregiver's time and energy. The family's responsibility in providing care for people with mental disorders has increased in the past three decades. This has been mainly due to a trend towards community care and the de-institutionalization of psychiatric patients.[33]

Miller et al. reported that the provision of any family treatment (family therapy or psycho-educational intervention) significantly improves the course of Bipolar disorder, particularly the number of depressive episodes and the time spent in a depressive episode. A few studies have analyzed the impact of psycho educational family intervention on suicide risk.[34]

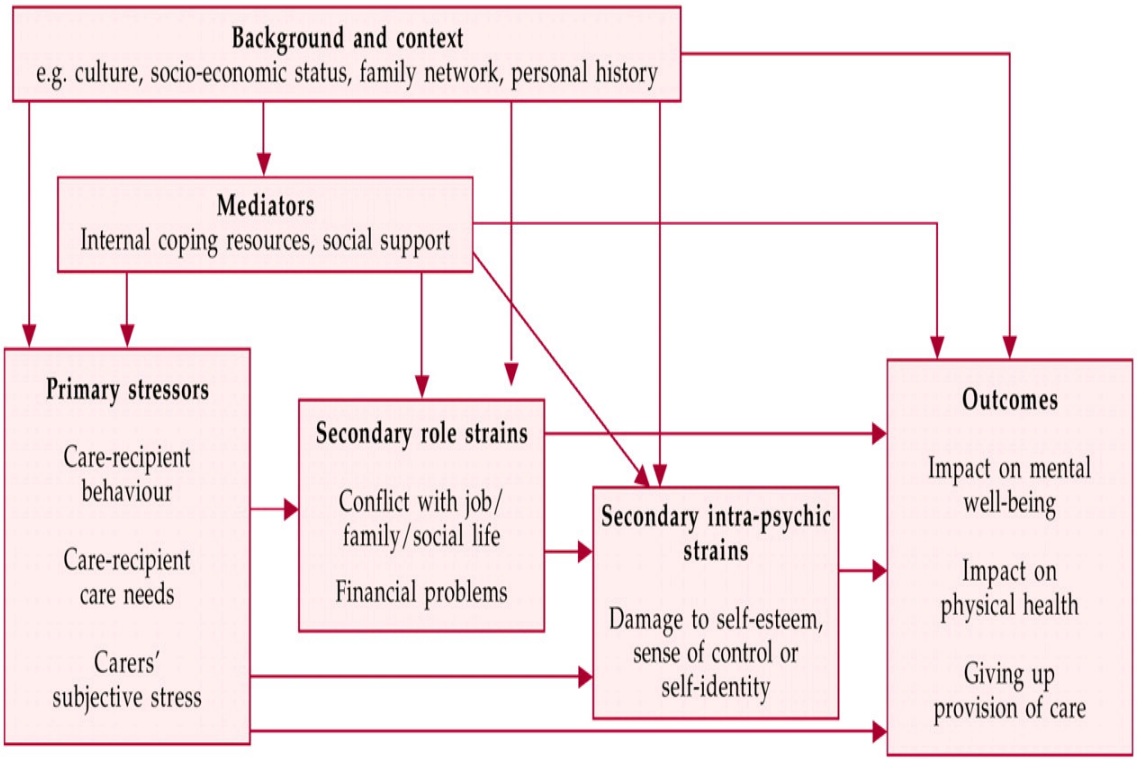
The impact of caring on caregiver's mental health

Caregivers provide assistance with activities of daily living, emotional support to the patient, and dealing with incontinence, feeding and mobility.

Due to high burden and responsibilities, caregivers experience poorer self-reported health, engage in less health promotion actions than non-caregivers, and report lower life satisfaction.[35]

In another study, family members living with a person with bipolar disorder reported poorer physical health, more limited activity, and greater health service utilization than non-caregivers.

PEARLIN'S MODEL OF STRESS IN CAREGIVERS[36]



Factors associated with psychological distress of the caregiver

Caregiver's profile like age, sex, physical status, social and cultural background were the factors associated with risk for psychological distress and depression.[37]

Behavioural disturbances, functional, physical and cognitive impairments, and fear of their relatives attempting suicide were the other factors associated with psychological distress. One of the strongest predictor of caregiver's distress and their decision to institutionalize the patient was the frequency of Behavioural disturbances made by the patients.[38]

Patient's unmanageable and unpredictable behavioral problems leads to stress and anxiety in caregivers which may further leads to depression, stress, and physical ill health.[39]

Caregivers of patients with both physical and cognitive impairments scores higher for objective burden than those who takes care of patients with either of the impairment alone.[40]

Factors affecting caregiver burden

Factors likely to influence caregiver burden includes: family type and size; economic and educational status, role expectations, and illness related beliefs.[41]

Domains associated with distress were studied and it was found that patient symptomatology, caregiver's ability to cope with patient symptoms and more contact with mental health professionals were related to the caregiving domains and the overall caregiving score. Patient's symptoms and increased hours of contact with the patient were related to higher levels of distress.

Caregivers experience greater burden and depressive symptomatology if they are of a younger age, have lower levels of education, and are exposed to higher levels of stigma than non-caregivers.

There is a diffusion of burden of taking care of mentally ill patients in joint families and lays an important role in better outcome and prognosis of major mental disorders, suggested by Leff et al.[42]

Many studies about families role in mental health revealed that psychiatric disorders were more likely to be associated with nuclear family structure than the joint family setting.[43-44]

Because of the joint family structure existing in rural families fewer patients has been hospitalized compared to urban families reported by Chandrashekar et al.[45]

Patient related factors affecting burden in their caregivers.

Sources of family burden include threatening and aggressive behavior of the patient, stigma attached to the illness, financial strain, marital disharmony and the need to provide extensive supervision.

Caregiving has a negative impact on quality of life, and is associated with other adverse effects, including poorer self-rated health, chronic medical conditions, increased health care utilization, and greater use of medication including antidepressants and also increases the risk for medical hospitalization.

Expressed Emotions

Brown, Car stairs and Wing (1958), were used the term Expressed Emotion (EE) which is one of the best predictors of mood swing (Miklowitz et al, 1998, 2000). Expressed Emotion is used as a scale to measure the extent of caregivers emotional attitudes to patient's psychiatric disorder. High EE is meant to be lots of critical comments, hostility-arising situations, or showing emotional over-involvement (like over protection, exaggerated emotional responses, or inordinate self-sacrifice).[46] Numerous trials have reported intense relationship between EE and poor outcome in schizophrenic patients, mood bipolar and other psychiatric disorders.[47]

A study conducted by (Sullivan & Miklowitz) in 2010,revealed that not only the family's levels of conflict in bipolar patients was higher than families of normal people but also higher impairment in interrelationship and compliance in such families.[48]

Miklowitz et al., 1998 and Priebe et al, 1989 studied that the risk of a relapse or re-hospitalization in patients with high EE is 5-9 times commoner than those with low EE.[49]

(Butzlaff & Hooley, 1998) reported that EE had a high effect size in predicting psychosis in schizophrenic patients. But the mean effect size of EE in mood disorder patients was even higher.[50]

BURDEN OF SPOUSES OF PATIENTS WITH BIPOLAR DISORDER

As spouses are the primary caregivers of patients with affective disorders, they seem to be the ones who suffer from FB of particular severity. With regard to this population, Perlick et al, observed that the level of burden experienced by members of procreative families is significantly higher compared to subjects from generative families.[51]

Cuijpers had found that FB in the families of patients with affective disorders is lower as compared to familial systems of subjects with other psychiatric disorders.[52]

Chadda et al. had found that the FB severity observed in families of patients with schizophrenia is no different from the one seen among relatives of BD sufferers. [53]

There are data suggesting that worse psychosocial functioning of patients with BD implies higher degree of FB.[54] in this clinical population depressive episodes trigger substantially higher severity of FB, as compared to manic episodes.[55] Reinares et al. found that the main determinants of significant level of FB in cases of BD were: an occurrence of depression during the previous two years, and a diagnosis of rapid cycling. Notably, none of the following: duration of illness, total number of mood disorder

episodes (including episodes with psychotic features), and history of suicidal attempts were significantly related to the severity of FB. According to the authors cited, high level of FB is sustained also during remission, as this form of burden seems to be driven by fear of illness recurrences, social withdrawal, and patients' social impairment. Nevertheless, it is hard to formulate any firm conclusions on the differences in FB severity between periods of remissions and relapses, as most of the researchers on this issue have focused on the acute mood episodes.[56]

Bauer et al. demonstrated that the main source of burden experienced by women was deterioration of the quality of relationships with their partners. By comparison, men suffered mainly because of lack of autonomy, uncertainty concerning their judgment of patients' capacity, and uncertainty because of the changing symptoms of illness.[57]

Van der Voort et al. analyzed the problem of 'being alone together' – an important source of distress among partners of patients with BD. The main origin of FB in this context was the experience of loneliness in everyday activities, with further consequences of the sense of 'abandonment' for caregivers' lives. The researchers found that the characteristic outcome of caregivers' coping strategies had been the tendency to consider the patients' needs to be of major importance, while not fully abandoning the goal of fulfilling their own requirements. Some of

the spouses had kept on searching for a balance between self-fulfillment and the requirements of providing care to their partners, and the others had given those attempts up. In the latter cases, either the caregivers submitted their lives to the partners' illness or they decided to break the relationships up.

The authors cited also emphasized the role of external support, e.g. the access to somebody who would be keen on hearing about caregiver's problems and on providing help in assessing current situation of a family. Of note, the intensity of the acts of support seems to be more important than their length.[58]

CAREGIVER BURDEN IN BIPOLAR AFFECTIVE DISORDER:

Caregiving Burden Associated with Having a Family Member with Bipolar Disorder are likely candidates for assuming caregiving responsibilities, especially during episodes of depression and mania .A number of studies have looked at the impact of caring for someone with bipolar disorder, although many of these studies included non-family caregivers, such as a spouse or partner (Perlick et al.2004, 2007).Studies have found that caring for relatives with bipolar disorder can lead to significant burden. Higher burden has also been associated with having more caregiving related financial costs.[59]

Reinares et al. (2006) found that the highest levels of burden were associated with the patient's behavior, how this behavior affected others, and the patient's role dysfunction. Caregivers found the patient's hyperactivity to be the most distressing symptom.[60]

Burden has been expressed in several different domains. With respect to financial burden, 27% of one caregiver sample reported a reduction in their salary since the onset of their relative's illness .Forty-nine percent of this group felt that they also had to manage the patient's finances when the patient was experiencing an episode, and 37% still felt they needed to continue to support the patient even after they were doing well.

Furthermore, 29% of the caregivers in the study felt they had incurred major expenses as a result of the illness (Dore & Romans, 2001).[61]These costs included medical expenses, such as medications and hospitalizations as well as expenses that were incurred as a result of manic episodes. Excessive spending, which is a common feature of manic episodes, can also lead to financial strain on the family and was shown to be a significant area of stress for almost half of the caregivers in the study (46%; Dore & Romans, 2001). The complications surrounding this disorder also make it more difficult for caregivers to maintain social relationships, both with the patient and with others.

In the Dore and Romans study (2001), 56% of the Dore and Romans sample said care-giving had a negative impact on relationships with other

family and friends. Caregiver burden has also been associated with poor health outcomes.

According to Perlick et al (2007), caregivers who reported experiencing higher levels of burden suffered from a multitude of negative health outcomes, including less exercise, poorer sleep patterns, smoking more cigarettes, and being neglectful of health-promoting behaviors. Caregivers with higher burden scores more frequently scored above the cutoff for depression (according to the CES-D scale) and reported a higher frequency of chronic medical conditions. However, it is hard to say whether these medical conditions may have contributed to the higher burden levels, or if the burden exacerbated current medical conditions.[59] Evidence has been shown that these caregivers experience poorer social, emotional, and physical functioning compared to controlled community samples (Heru et al, 2004).[62]

Interestingly, the relationship between caregiving burden and patient functioning is reciprocal. Perlick et al. (2004) found that caregiver burden was positively correlated to their emotional over-involvement which was, in turn, negatively correlated with the patient's medication adherence (Perlick et al., 2004). This implies that burden may indirectly affect the patient's treatment outcomes, which in turn may cause poorer illness behavior, and further impact the family. In other words, family burden and patient illness can enter a vicious cycle, with each negatively impacting the other.[59]

Ogilive et al observed that Caregivers of patients with BPAD not only experience a different quality of burden than is seen with other illnesses but also have high levels of expressed emotion, including critical, hostile, or over-involved attitudes. Inter episode symptoms and subsyndromal depressive symptoms pose another potential of burden in patients with BPAD resulting in severe and wide spread functional impairment.[63]

Ostacher et al studied 1.the relation-ship between mood symptoms and episodes in BPAD patients 2.the relationship between course and subsequent caregiver burden based on subjective and objective burden reported by caregivers of patients with BPAD and reported that depressive episode was not only related with greater objective and subjective caregiver burden but also associated with significant burden even after controlling it.[64]

Perlick evaluated caregivers burden associated with care giving, the stress, coping, health and service use in patients with BPAD and Cluster analysis showed that non-stigmatizedcaregivers had better health outcomes and less service use than the stigmatized or burdened caregivers.[59]

Janowsky et alreported that the well spouse often believed that the manic phase was willful, spiteful act, whereas the patient felt unfair, victimized and blamed for things beyond his control. In similar manner, the withdrawal, helplessness, and suicidal tendency manifested during acute

depressive episode may be constructed differently by family members.[65] 57% of bipolar patients who had been married had subsequently seen divorced or separated.[66] Follow up studies report that two third of bipolar individuals continue functionally impaired with affective symptoms that interfere with partners and interpersonal relations.[67-68]

Mac Vore et al found no significant difference in the psychological functioning of remitted bipolar patients compared with individuals having no history of psychiatry problems.[69]

Targum et alemployed family attitude questionnaire to quantify the perception of 19 bipolar patients and their well spouses to quantify the perception about the long term burden of bipolar illness. They found that many respondents considered violent behavior in acute mania and suicide threats or attempts in depressive episodes as the most troubling characteristics of illness. Patients also listed poor judgment in mania and hopelessness and poor concentration in depression as the troubling characteristics of illness. Their spouses listed impulsive spending, over talkativeness, and a decreased need for sleep in mania, and lowered self-esteem and withdrawal from others in depression as the troublesome factors. Both patients and spouses reported financial difficulties and unemployment as the most troubling prolonged consequences of affective illness. Marital problems, recurrences leading to rehospitalisations and social withdrawal

were the other most frequently listed troublesome items. They also found that 77% of spouses of patient having mania and 72% spouses of patients having depression considered the illness to be high to extreme burden to them. Well spouses who had coped with affective illness for many years perceived bipolar illness as a profound burden that had seriously disrupted their lives. Youngest well spouses, having the least experience with affective illness, perceived it as minimal burden. They also reported that Bipolar illness may create a burden, both during acute phases and between episodes. When acutely ill manic patient's intrusiveness, irrationality, and pressured state many provoke anger in others and ultimately lead to rejection. The family often perceives the manic behavior differently than the patient.[70]

Fadden et alstudied 16 spouses of Unipolar and Bipolar depression, 8 each, using a new schedule based on Social Behavioral Assessment Schedule (SBAS). The new schedule assessed role function & allocation, difficult behaviors and the relative's knowledge about the patient's condition and opinion of the service received. They found that nearly half of spouses found work a strain as a result of the responsibilities towards the patients. In 41%, the state of finances had become worse since the patient became ill. Most loss of income came about because the patient was unable to work. 71% of spouses experienced reduction in the number of social

activities as a result of the patient's illness. About 25% reported that they felt they had no-one to turn to for help or support. Many were embarrassed and reluctant to tell people about the spouse's illness. The spouses of Bipolar patients frequently reported that the things had been difficult during the first episode as they did not understand what was going on. Dissatisfaction with the changes was strongest among the relatives of Bipolar patients. Nearly half of the spouses felt that the patients had become like child, someone who needed to be looked after. Martial and sexual relationships were badly affected.

Spouses took over various roles the patient would normally be expected to carry out and wives found this particularly difficult. Relatives lost the facility of confiding, and commonly took decision on their own. Their expectations of the relationships were generally reduced and many particularly women, had a sense of bereavement as a result. They found that relatives reported worrying, irritability and nagging as more burdensome than the acute florid symptoms. [71]

Similar finding has been found in the relatives of those with schizophrenia who complained less frequently of florid than of negative symptom. Florid symptoms also cause difficulties but they are intermittent and less frequent, and the major proportion of the burden occasioned by symptom seems from the negative ones. [72]

Chakrabarthi et aladministered Family Burden Interview Schedule to the relatives of 78 patients with affective disorder (BPAD, Recurrent MDD) and 60 patients with schizophrenia [Relatives were those who were staying with the patient currently and at least for 3 previous years and who were healthy adult aged 18 years or more]. They found that both the groups reported financial burden, disruption of family routine, family leisure and family interaction as burdensome. In the affective disorder group, maximum burden was experienced in the area of disruption of family routine followed by disruption of family interactions. The extent of both objective and subjective burden was significantly more in relatives of schizophrenics. The pattern of burden was however, almost similar in both the groups. Burden was principally felt in the areas of family routine, family leisure, family interaction and finances. Financial burden was primarily a direct outcome of loss of patient's income and secondarily due to expenses of treatment. Many relatives reported that the illness of their kin had severely dented their savings and some families were forced to take loans. Disruption of family interactions was as a consequence of patient's illness. Family members remained tense and irritable and had frequent misunderstandings among themselves about caring for the patient. The emotional health of caretakers was affected in a number of cases, with many reporting loss of sleep or appetite and constant worrying. [73]

Mueser et alstudied 1.The caregivers burden of 20 common problem behaviors associated with manic, positive, and negative symptoms among patients with schizophrenia or bipolar disorder 2.assessed the accuracy of mental health professional's judgment about caregivers burden by using two separate questionnaires. They found that caregivers of patients with bipolar disorder rated manic symptoms as more burdensome than caregivers of patients with schizophrenia, but relatives of patients in the two groups did not differ in their ratings of burden associated with positive or negative symptoms. Professionals' perceptions of the burden associated with manic symptoms were relatively accurate, but they tended to underestimate the burden of positive and negative symptoms experienced by relative of patients with bipolar disorder.[74]

Perlick et alemployed Social Behavior Assessment Scale (SBAS) to family members of 1934 patients diagnosed as Bipolar disorder. SBAS was used to assess care-givers experience of objective and subjective burden in three domains- the patient's problematic behaviors (violence, unpredictability), his or her social role dysfunction at home or work, his or her adverse effects on others (the impact of the illness on the caregivers work, social and leisure time). They found that about 91% caregivers considered problem behaviors as moderate to severe burden, 82% caregivers

considered adverse effects on others as burdensome, and 65% Caregivers considered role dysfunction of patients as burdensome. The three most frequently sited moderately distressing behaviors were misery, irritability and withdrawal. 93% of caregivers reported at least a moderate degree of burden in at least one domain.54% reported severe distress in one or more, 33% in two or more and 13% in all burden domains. [75]

Hirshfeld et alreported the most frequently experienced psychological problems were relationship problems, including interpersonal conflicts with family & friends, marital difficulties, job & school related problems, physical health problems and alcohol and substance abuse.[76]

Wang et al has given following reasons for high cost of mood disorders - That they are chronic diseases and tend to strike earlier in the life course than other conditions with comparable prevalence.[77] Mood disorders are associated with very large decrements in multiple aspects of work performance. This leads to large aggregate losses again because mood disorders tend to strike before or during prime working years.

The chronicity of mood disorders further adds to these substantial losses in productivity.[78]

- Another reason is that few people with mood disorders receive adequate care, despite the availability of effective treatments that could otherwise lead to improved clinical and work outcomes.

In the nationally generalizable US National Health Interview Survey (NHIS), those with bipolar disorder were found to be 40% less likely to be gainfully employed.[79]

Predictors of Caregiver Burden in Bipolar Affective Disorder

Zergaw et al conducted a comparative study in order to explain how economic and family caregiver burden affects the caregivers of bipolar patients with that of various medical illness. Results showed that bipolar patients' family caregivers were found to be more burdened, than family caregivers of other groups.

Longitudinal caregivers' studies of patients with mood disorders report no consistent pattern of burden overtime and another study on caregivers of patients with BPAD measured their perception of burden, reward and family functioning and informed that Caregivers of Bipolar Disorder reported less reward, more subjective burden and worse family functioning than depression. Bipolar caregivers showed a significant reduction in burden 1 year after their relative was discharged from the hospital, whereas depression caregivers showed no change at 1 year. At 1

year, overall family functioning was unchanged and was in the unhealthy range in all dimensions except for behavior control. Caregivers of relatives with mood disorder show a different pattern of burden and reward, overtime, depending on the patient diagnosis. however, family functioning was significantly impaired In all case.[80]

COPING

Behavioural, cognitive and emotional attempts to mitigate or manage stressful or threatening circumstances, the continual process of interpreting and responding to life's demands**.**

Coping strategies refer to the specific efforts, both behavioral and psychological that people employ to master, tolerate, reduce or minimize stressful events.

Coping is an adaptive or otherwise successful method of dealing with individual or environmental situations that involve psychological and physiological stress or threat. The psychological definition of coping the process of managing taxing circumstances, expending effort to solve personal and interpersonal problems, and seeking to master, minimize, reduce or tolerate stress or conflicts.

Two general coping strategies have been distinguished:

1. Problem solving strategies: these are efforts to do something active to alleviate Stressful circumstances.

2. Emotion focused coping strategies: these involve efforts to regulate the emotional consequences of stressful or potential stressful events.

THE RELATIONSHIP BETWEEN COPING WITH A RELATIVE'S ILLNESS AND THE BURDEN

Family member's illness is a source of significant stress for his or her close relatives. Both objective and subjective troubles (on one hand: an illness' impact towards other family members' health, potential of fulfilling their needs, and family's economic outcomes; on the other: a sense of anxiety or burn-out due to over-involvement in caregiving) contribute to mental disorder-related stress and FB.[81]

Minuchin has claimed that a family's capability of adapting to a difficult situation of the presence of its member's psychiatric disorder depends both on particular individuals' resources, as well as the pace of the development of psychopathological symptoms'. Accordingly, a mild and slowly developing disorder would offer more space for family's adaptation, while rapid progress or sudden relapses of an illness may trigger

destabilization or even break-up of a family. Recently, however, this idea has been challenged, as research suggests that illness dynamics is not the main determinant of FB.[82-83]

Chadda et al. had found that burden experienced by caregivers of patients with BD does not decrease significantly over time, even though the severity of the illness wanes.[84]

The phenomenon of coping is seen in the perspective of the following three complementary dimensions: process, strategy, and style.[85] It seems that a preferred copying strategy exerts a major impact on the magnitude of mental disorder-related FB. Available evidence suggests that problem-focused coping strategies and low level of criticism (implying low level of expressed emotions) are related to lower values of FB.[86-87]

Östman and Hansson observed that the preference for task-focused coping strategies in families of patients with BD was related to lower levels of FB and lower rates of chronicity, while emotion-focused coping strategies are bound to persistence of symptoms or lack of changes in patients' behaviors.[88]

In a study regarding families of subjects with MDD or schizophrenia Möller-Leimkühler found that avoidance coping strategy is strongly correlated with both high level of EE and FB.

In an earlier study Wendel et al. had also noticed a positive correlation between the values of EE and FB.[89]

By applying Hoenig and Hamilton's classification of burden into objective and subjective subtypes, Thompson and Doll came to conclusion that while in about 50% of psychiatric patients' caregivers heavy subjective burden had been accompanied by corresponding scale of objective burden, 70% of families members who had been denying objective burden had been experiencing severe subjective burden. Although 2/3 of the patients participating in the study enjoyed stable clinical status, their caregivers suffered from emotional overload.

COPING STRATEGIES IN FAMILIES OF PATIENTS WITH BIPOLAR DISORDERS

Coping is an adaptive or otherwise successful method of dealing with individual or environmental situations that involve psychological and physiological stress or threat. Coping is defined psychologically as the process of handling tough situations, paying effort to solve personal and interpersonal problems, and seeking to master, minimize, reduce or tolerate stress or conflicts.

Studies had found that caregivers use both types of strategies to handle most stressful situations and predominantly it was determinedby

1. their personal styles 2. the type of stressful event, People typically employ problem focused coping to deal with potential, controllable problems, such as work related problems and family related problems, whereas stressors perceived less controllable such as physical health problems prompt more emotion focused coping.

Active coping strategies :1.Active coping strategies are either behavioural, or psychological responses designed to change the nature of the stressor itself otherwise they are thought to be better ways to deal with stressful events.

Avoidant coping strategies : Avoidant coping strategies lead people into activities (such as alcohol use) or mental states (such as withdrawal) that keep them from directly addressing stressful events .

Broad distinctions such as problem solving vs. emotion focused, or active vs avoidant have only limited utility for understanding coping, and so research on coping and its measurements have evolved to address a variety of more specific coping strategies.

Each caregiver perceives the burden of illness differently because it varies according to his or her way of coping.

Caring for a relative with a mental illness is regarded as an enduring stress, and the coping strategies adopted helps them to meet the demands of

caregiving .Coping influences adjustment, and the use of effective coping strategies have been consistently linked with higher levels of well-being.[90]

A study on 30 families of mentally ill adults to assess stress and coping patterns was carried out and most of the Caregivers expressed concerns regarding the future of the patient and the family. The coping strategies mentioned by caregivers were acceptance of the situation, feeling that life must go on, and relying on oneself.[91]

In one study caregiver coping style and its relationship with burden was explored. More 70% of the samples were women, majority were parents of the index patient and 85% of the patients were males. Caregivers experiencing higher degree of subjective burden reported more behavioral disturbance in their relative and also experienced higher levels of psychological distress. Four maladaptive coping styles, emotional over involvement, criticism-coercion, and collusion and over protectiveness were correlated with greater burden.[92]

Another one-year follow up of 159 relatives had shown how family burden changes over time; it was found that burden was stable. A reduction of burden over time was found in relatives who used more social support and less of emotion focused coping strategies. Thissuggests that use of more effective coping strategies can reduce perceived burden over time.[93]

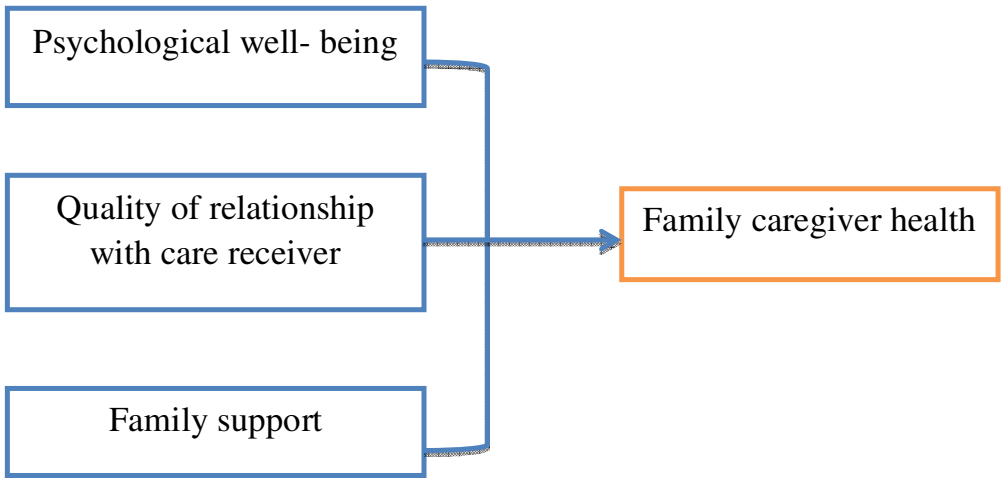
Existing work on coping strategies used by caregivers indicates that

emotion focused coping strategies are more likely to be used in dealing with the stress generated by the caregiving situation. The use of avoidance coping has been linked to greater distress and burden, while problem focused coping strategies and the factor of mastery has been liked to positive outcomes.

PSYCHOLOGICAL WELL BEING

It is a state of emotional and psychological wellbeing in which an individual is able to use his or her cognitive and emotional capabilities, function in the society, and meet the ordinary demands of everyday life.

CONCEPTUAL MODEL OF PSYCHOLOGICAL WELL- BEING



Psychological wellbeing is a health related quality of life measure that is a subjective, psychological dimension. It attempts to measure a global psychological concept attained by integrated the different axes of DSMIV. The resulting components that are generally measured by health related quality of life scales are general health, emotional health, vegetative symptoms, autonomy, accomplishment and understanding.

METHODOLOGY

MATERIALS & METHODS

Source of data:

A cross sectional study was done during the period of January 2014-June 2014, in the Psychiatry Department of Thanjavur Medical College Hospital, Thanjavur. It is a tertiary care hospital. For this study, a sample size consisting of 52 caregivers of bipolar patients were included in the study.

Inclusion criteria for patients:

- Diagnosed as Bipolar affective disorder according to ICD-10

Exclusion criteria :

- Comorbid physical and other Psychiatric illness
- Organic illness
- Associated with personality disorder or MR

Inclusion criteria for caregivers :

- Parents , spouse or other relatives of the index patient who actively involved in the care of the patient

- Living with the patients or has the most frequent contact with the patient

Exclusion criteria for caregivers :

- Comorbid physical and other psychiatric illness
- Associated with personality disorder or MR

Sampling methods:

Patients attending the Psychiatric outpatient Department in Thanjavur Medical College hospital, with a diagnosis of bipolar disorders and their caregivers were included in the study, after getting the informed consent about the study they were included.

METHODS:

Informed consent form (ANNEXURE-A)

Assessment of the patient:

- Patient socio demographic data sheet (ANNEXURE-B)
- ICD-10 (International classification of mental and behavioural disorders-Clinical descriptions and Diagnostic Guidelines,10th revision,1992) for diagnosing Bipolar Disorder.

Assessment of the caregivers:

- Caregiver socio demographic data sheet (ANNEXURE-C)
- Burden Assessment schedule(ANNEXURE-D)
- Psychological General Well Being Index(ANNEXURE-E)
- Brief Cope Scale (ANNEXURE-F)

Description of tools:

A. Patient socio demographic data sheet: (ANNEXURE-B)

A semi structured socio demographic data sheet was developed to record details about the patient, such as age, education, occupation, income, marital status and areas of residence of the patient. Information regarding diagnosis and duration of illness, were also noted.(Annexure II)

B. Caregiver socio demographic datasheet: (ANNEXURE-C)

This includes following information age, gender, education, occupation, income, religion, type of family, residential area, duration of marriage (for spouse caregivers), and duration of care.

C.Burden Assessment Schedule (BAS): [ANNEXURE-D**]**

It is an instrument to assess burden on caregivers of chronic mentally ill. It was developed to assess subjective burden in Indian population, as many of the burden assessment instruments developed

in the west were not culturally suited to Indian population.

This schedule has 40 items and 9 domains. The different domains are Spouse related, Physical and mental health, External support, Caregivers routine, Support of patient, Taking responsibility, Other relations, Patients behavior and Caregivers strategy . Each of these 40 items was rated on a 3-point scale marked 1-3. The responses were not at all, to some extent and very much. Depending on the way the questions were framed, the responses and the score for each of those responses would vary.

In this study the schedule was modified by arranging these 40- items into the above 9 domains. Total score of each domain was calculated separately and the total burden was calculated. This was done to get the domain score apart from the total score. The minimum total score of burden in BAS is 40 and the maximum score is 120, with higher scores indicating higher burden. The BAS has been validated against the family burden schedule of Pai and Kapur (1981) and the correlations ranged from 0.71 to 0.82 for most items. Inter- rater reliability for the scale is 0.80 (kappa, $p<0.01$).The test-retest reliability, computed for a period of 3 months, is 0.91, and the alpha coefficient is 0.92. the BAS was used in this study as it was developed in the Indian setting and thus helps to understand and interpret burden in the cultural context. Moreover, it taps subjective burden extensively, which is important as it has an impact on the quality of life of the caregiver.[94]

D.Psychological General Well-Being Index:(ANNEXURE-E)

This scale was mainly developed for the evaluation of perceived well-being and distress. It consist of 22 items which described under six dimensions: 1.Anxiety, 2.Depression, 3. Positive Well-Being, 4.Self-Control, 5. General Health, and 6.Vitality.

The original scoring by item was 0-5, giving a maximal score of 110. In several studies, the scoring has been changed to 1-6, giving a score range of 22-132. Although it is primarily self-administered it has also been administered by an interviewer or completed by relatives. Measurements of well-being have also been made on normal populations and during health examination programmes. It is a general measure of subjective well-being and hence not condition specific.[95]

E. Brief cope scale(ANNEXURE-F)

The Brief COPE is a self-completed questionnaire measuring coping strategies. It is the shortened version of the COPE inventory and presents fourteen subscales all assessing different coping dimensions: 1) active coping, 2) planning, 3) using instrumental support, 4) using emotional support, 5) venting, 6) behavioral disengagement, 7) self-distraction, 8)self-blame, 9) positive reframing, 10) humor, 11) denial, 12) acceptance,

13) religion, and 14) substance use. Each scale contains two items (28 altogether).

Three composite subscales measuring emotion-focused, problem focused, and dysfunctional coping have proved useful in clinical research and have content validity. Internal consistency alphas for the scales provided for in the Brief COPE ranged from .52 to .90 (Carver, 1997), which were considered to be acceptable internal reliabilities as supported by the data.

This scale can also be interpreted in two dimensions as Adaptive and maladaptive coping styles. The Adaptive Coping subscale contains 16 items with a possible range of 0 to 48, such that higher scores indicate greater use of adaptive coping.

The Adaptive Coping subscale includes Active Coping, Planning, Positive Reframing, Acceptance, Humor, Religion, Using Emotional Support, and Using Instrumental Support. The Maladaptive Coping subscale contains 12 items with a possible range of 0 to 36, such that higher scores indicate greater use of maladaptive coping. The Maladaptive Coping subscale includes Self-Distraction, Denial, Venting, Substance Use, Behavioral Disengagement, and Self-Blame.[96]

Statistical analysis:

Using SPSS software descriptive statistics were computed and categorical variables were described as frequencies and percentages. The ANOVA and Chi-Square test was used to compare categorical variables. Comparison ofcontinuous variables was analyzed with independent sample test.

RESULTS AND INTERPRETATIONS

Table 1: Socio-Demographic data of caregivers

SL.NO	VARIABLES	CAREGIVERS	
		(n=52)	(100%)
	AGE IN YEARS		
1.	<30	6	11.5
2.	31 – 40	12	23.1
3.	41 – 50	12	23.1
4.	51years and above	22	42.3
	EDUCATION		
1.	Illiterate	20	38.5
2.	Primary (up to 5^{th})	5	9.6
3.	Middle (up to 8^{th})	12	23.1
4.	Up to HSC	13	25
5.	Diploma	-	-
6.	graduate/post graduate	2	3.8
	OCCUPATION		
1.	Unemployed	5	9.6
2.	Unskilled worker	23	44.2
3.	semi-skilled worker	3	5.8
4.	Skilled worker	-	-
5.	clerical, shop owner ,farmer	21	40.4
	INCOME		
1.	1743	12	23.1
2.	1744 – 5223	32	61.5
3.	5224 – 8706	3	5.8
	SOCIO – ECONOMIC CLASS		
1.	Upper	-	-
2.	Upper middle	2	3.8
3.	Lower middle	4	7.7
4.	Upper lower	31	59.6
5.	Lower	15	28.8
	RELIGION		
1.	Hindu	50	96.2
2.	Christian	1	1.9
3.	Muslims	1	1.9

The above table reveals that 42.3% were in the age group of 51 years and above,38.5% were illiterate,44.2% were unskilled workers, majority were belonging to Hindu religion and most of them were living in rural set up.

Table 2: Socio-Demographic data of caregivers with duration of care

	DURATION OF CARE	No.of caregivers (n=52)	Percentage (100%)
1.	Below 5 years	24	46.2
2.	5 - 10 years	8	15.4
3.	10 - 15 years	8	15.4
4.	15 - 20 years	7	13.5
5.	21 - 25 years	4	7.7
6.	25 years and above	1	1.9

The above table reveals that nearly half of the (46.2 per cent) care givers are below 5 years duration of care; 15.4 per cent are 5 to 15 years. 13.5 per cent are 15 to 20 years and remaining are more than 21 years.

DESCRIPTIVE STATISTICS PERSONAL PROFILE OF PATIENTS

Item	Min	Max	Mean	S.D
Patient Age	18	63	39.50	11.243
Patient Age at onset	15	51	29.65	8.143
Patient No of episode	2	14	5.25	2.821
Patient Duration of illness	1	6	2.27	1.457

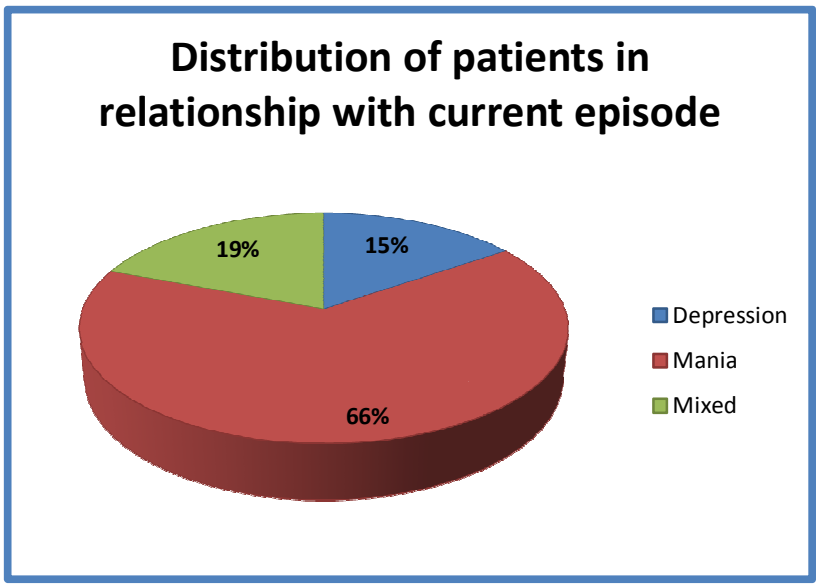


Table:3 CORRELATIONS BETWEEN CAREGIVER SOCIODEMOGRAHIC CHARECTERISTICS AND BURDEN WITH REGARD TO AGE

Age	Mean	S.D	Statistical inference
I Spouse Related			
Between Groups			F=.952 .423>0.05 Not Significant
Below 30yrs(n=6)	5.50	3.834	
31 to 40yrs(n=12)	7.67	3.499	
41 to 50yrs(n=12)	7.58	3.825	
51yrs & above(n=22)	5.82	4.382	
Within Groups			
II Physical and Health			
Between Groups			F=.821 .489>0.05 Not Significant
Below 30yrs(n=6)	11.17	3.764	
31 to 40yrs(n=12)	12.42	2.392	
41 to 50yrs(n=12)	12.92	1.443	
51yrs & above(n=22)	12.64	2.194	
Within Groups			
III External support			
Between Groups			F=.322 .809>0.05 Not Significant
Below 30yrs(n=6)	9.17	3.312	
31 to 40yrs(n=12)	9.50	3.606	
41 to 50yrs(n=12)	10.42	3.343	
51yrs & above(n=22)	10.23	3.038	
Within Groups			
IV Care givers routine			
Between Groups			F=.438 .727>0.05 Not Significant
Below 30yrs(n=6)	10.67	2.160	
31 to 40yrs(n=12)	10.42	2.234	
41 to 50yrs(n=12)	11.08	1.676	
51yrs & above(n=22)	11.14	1.754	
Within Groups			
V Support of patient			
Between Groups			F=.952 .423>0.05 Not Significant
Below 30yrs(n=6)	9.17	2.041	
31 to 40yrs(n=12)	9.42	1.621	
41 to 50yrs(n=12)	10.33	1.670	
51yrs & above(n=22)	10.00	1.690	
Within Groups			

VI Taking Responsibility			
Between Groups			F=.563 .642>0.05 Not Significant
Below 30yrs(n=6)	9.00	2.757	
31 to 40yrs(n=12)	9.75	2.221	
41 to 50yrs(n=12)	9.67	1.435	
51yrs & above(n=22)	10.09	1.601	
Within Groups			
VII Other relations			
Between Groups			F=3.925 .014<0.05 Significant
Below 30yrs(n=6)	4.83	1.722	
31 to 40yrs(n=12)	7.08	1.676	
41 to 50yrs(n=12)	7.25	1.055	
51yrs & above(n=22)	6.86	1.552	
Within Groups			
VIII Patients behaviour			
Between Groups			F=.818 .490>0.05 Not Significant
Below 30yrs(n=6)	8.33	1.862	
31 to 40yrs(n=12)	9.08	1.832	
41 to 50yrs(n=12)	9.67	1.923	
51yrs & above(n=22)	9.45	1.792	
Within Groups			
IX Care givers Strategy			
Between Groups			F=1.345 .271>0.05 Not Significant
Below 30yrs(n=6)	8.83	2.563	
31 to 40yrs(n=12)	9.08	1.676	
41 to 50yrs(n=12)	10.00	1.348	
51yrs & above(n=22)	9.82	1.220	
Within Groups			
BAS Total			
Between Groups			F=1.457 .238>0.05 Not Significant
Below 30yrs(n=6)	76.67	16.813	
31 to 40yrs(n=12)	85.92	12.559	
41 to 50yrs(n=12)	89.92	10.104	
51yrs & above(n=22)	86.55	13.019	
Within Groups			

The above table reveals that there is no significant difference between care givers age and their opinion about overall BAS score.

Table:4CORRELATIONS BETWEEN CAREGIVER SOCIODEMOGRAHIC CHARECTERISTICS AND BURDEN WITH REGARD TO GENDER

Gender	Mean	S.D	Statistical inference
I Spouse Related			
Male (n=33)	5.82	3.941	T=-1.942 Df=50 .058>0.05 Not Significant
Female (n=19)	8.00	3.830	
II Physical and Health			
Male (n=33)	12.61	2.207	T=.513 Df=50 .610>0.05 Not Significant
Female (n=19)	12.26	2.513	
III External support			
Male (n=33)	10.03	3.245	T=.145 Df=50 .885>0.05 Not Significant
Female (n=19)	9.89	3.230	
IV Care givers routine			
Male (n=33)	10.85	1.698	T=-.279 Df=50 .782>0.05 Not Significant
Female (n=19)	11.00	2.186	
V Support of patient			
Male (n=33)	9.91	1.684	T=.347 Df=50 .730>0.05 Not Significant
Female (n=19)	9.74	1.790	
VI Taking Responsibility			
Male (n=33)	9.76	1.733	T=-.157 Df=50 .876>0.05 Not Significant
Female (n=19)	9.84	2.089	
VII Other relations			
Male (n=33)	6.70	1.447	T=-.418 Df=50 .678>0.05 Not Significant
Female (n=19)	6.89	1.941	
VIII Patients behaviour			
Male (n=33)	9.12	1.799	T=-.867 Df=50 .390>0.05 Not Significant
Female (n=19)	9.58	1.895	

IX Care givers Strategy			
Male (n=33)	9.64	1.319	T=.358 Df=50 .722>0.05 Not Significant
Female (n=19)	9.47	1.954	
BAS Total			
Male (n=33)	85.12	11.965	T=-.670 Df=50 .506>0.05 Not Significant
Female (n=19)	87.63	14.694	

The above table reveals that there is no significant difference between care giver gender and their opinion about overall BAS score.

Table :5 DISTRIBTION OF CARE GIVER OVERALL BAS SCORE WITH REGARD TO EDUCATION

Education qualification	Mean	S.D	Statistical inference
I Spouse Related			
Between Groups			F=.550 .700>0.05 Not Significant
Illiterate (n=20)	6.20	4.408	
Primary (n=5)	5.20	4.438	
Middle (n=12)	8.00	3.330	
Hsc (n=13)	6.54	3.777	
UG/PG (n=2)	6.50	6.364	
Within Groups			
II Physical and Health			
Between Groups			F=.295 .880>0.05 Not Significant
Illiterate (n=20)	12.45	1.820	
Primary (n=5)	12.40	3.209	
Middle (n=12)	12.00	3.275	
Hsc (n=13)	12.85	1.772	
UG/PG (n=2)	13.50	2.121	
Within Groups			
III External support			
Between Groups			F=2.468 .058>0.05 Not Significant
Illiterate (n=20)	10.60	2.873	
Primary (n=5)	7.40	4.930	
Middle (n=12)	9.83	3.010	
Hsc (n=13)	10.85	1.281	
UG/PG (n=2)	5.50	7.778	
Within Groups			
IV Care givers routine			
Between Groups			F=.239 .915>0.05 Not Significant
Illiterate (n=20)	11.10	1.586	
Primary (n=5)	11.20	2.864	

Middle (n=12)	10.67	2.188	
Hsc (n=13)	10.85	1.819	
UG/PG (n=2)	10.00	1.414	
Within Groups			
V Support of patient			
Between Groups			F=.745 .566>0.05 Not Significant
Illiterate (n=20)	10.20	1.735	
Primary (n=5)	9.40	1.817	
Middle (n=12)	9.50	1.977	
Hsc (n=13)	10.00	1.354	
UG/PG (n=2)	8.50	2.121	
Within Groups			
VI Taking Responsibility			
Between Groups			F=1.952 .117>0.05 Not Significant
Illiterate (n=20)	9.90	1.553	
Primary (n=5)	10.00	2.550	
Middle (n=12)	8.92	2.193	
Hsc (n=13)	10.62	1.387	
UG/PG (n=2)	8.00	1.414	
Within Groups			
VII Other relations			
Between Groups			F=.119 .975>0.05 Not Significant
Illiterate (n=20)	6.95	1.050	
Primary (n=5)	6.60	2.191	
Middle (n=12)	6.58	2.392	
Hsc (n=13)	6.77	1.589	
UG/PG (n=2)	6.50	.707	
Within Groups			
VIII Patients behaviour			
Between Groups			F=.626
Illiterate (n=20)	9.40	1.789	

Primary (n=5)	9.00	1.871	
Middle (n=12)	9.17	2.406	
Hsc (n=13)	9.62	1.261	
UG/PG (n=2)	7.50	2.121	
Within Groups			.646>0.05 Not Significant
IX Care givers Strategy			
Between Groups			F=.726 .579>0.05 Not Significant
Illiterate (n=20)	9.85	1.268	
Primary (n=5)	9.60	2.191	
Middle (n=12)	8.92	1.975	
Hsc (n=13)	9.69	1.437	
UG/PG (n=2)	10.00	.000	
Within Groups			
BAS Total			
Between Groups			F=.270 .896>0.05 Not Significant
Illiterate (n=20)	87.25	11.796	
Primary (n=5)	84.40	17.573	
Middle (n=12)	83.50	17.584	
Hsc (n=13)	87.77	9.373	
UG/PG (n=2)	82.00	4.243	
Within Groups			

The above table reveals that there is no significant difference between care giver education and their opinion about overall BAS score

Table:6 DISTRIBTION OF CARE GIVER OVERALL BAS SCORE WITH REGARD TO OCCUPATION

Occupation	Mean	S.D	Statistical inference
I Spouse Related			
Between Groups			F=.599 .619>0.05 Not Significant
Unemployed(n=5)	8.00	3.464	
Unskilled(n=23)	7.04	4.161	
Semi-Skilled(n=3)	7.00	4.359	
Others(n=21)	5.76	4.011	
Within Groups			
II Physical and Health			
Between Groups			F=1.165 .333>0.05 Not Significant
Unemployed(n=5)	11.40	2.881	
Unskilled(n=23)	12.26	2.472	
Semi-Skilled(n=3)	14.33	2.082	
Others(n=21)	12.71	1.953	
Within Groups			
III External support			
Between Groups			F=.254 .858>0.05 Not Significant
Unemployed(n=5)	9.60	2.608	
Unskilled(n=23)	10.13	3.035	
Semi-Skilled(n=3)	11.33	.577	
Others(n=21)	9.71	3.783	
Within Groups			
IV Care givers routine			
Between Groups			F=.897 .450>0.05 Not Significant
Unemployed(n=5)	9.80	1.924	
Unskilled(n=23)	11.26	1.912	
Semi-Skilled(n=3)	11.00	2.000	
Others(n=21)	10.76	1.814	
Within Groups			

V Support of patient			
Between Groups			F=.917 .440>0.05 Not Significant
Unemployed(n=5)	8.80	1.924	
Unskilled(n=23)	10.00	1.679	
Semi-Skilled(n=3)	10.67	1.528	
Others(n=21)	9.81	1.721	
Within Groups			
VI Taking responsibility			
Between Groups			F=1.498 .227>0.05 Not Significant
Unemployed(n=5)	10.20	2.387	
Unskilled(n=23)	9.83	1.992	
Semi-Skilled(n=3)	11.67	.577	
Others(n=21)	9.38	1.564	
Within Groups			
VII Other relations			
Between Groups			F=.520 .671>0.05 Not Significant
Unemployed(n=5)	7.00	2.550	
Unskilled(n=23)	6.52	1.620	
Semi-Skilled(n=3)	7.67	1.155	
Others(n=21)	6.86	1.493	
Within Groups			
VIII Patients behavior			
Between Groups			F=.010 .999>0.05 Not Significant
Unemployed(n=5)	9.20	2.168	
Unskilled(n=23)	9.26	1.711	
Semi-Skilled(n=3)	9.33	2.082	
Others(n=21)	9.33	1.983	
Within Groups			
IX Care givers strategy			
Between Groups			F=.762 .521>0.05
Unemployed(n=5)	8.60	2.408	

Unskilled(n=23)	9.70	1.608	Not Significant
Semi-Skilled(n=3)	10.00	1.732	
Others(n=21)	9.62	1.284	
Within Groups			
BAS Total			
Between Groups			
Unemployed(n=5)	83.80	17.413	
Unskilled(n=23)	86.52	13.487	F=.377 .770>0.05 Not Significant
Semi-Skilled(n=3)	93.00	2.646	
Others(n=21)	85.05	12.488	
Within Groups			

The above table reveals that there is no significant difference between care giver occupation and their opinion about overall BAS score.

Table:7 DISTRIBTION OF CARE GIVER OVERALL BAS SCORE WITH REGARD TO INCOME

Income	**Mean**	**S.D**	**Statistical inference**
I Spouse Related			
Between Groups			F=.898 .449>0.05 Not Significant
Nil (n=5)	8.00	3.464	
Below Rs.2000 (n=12)	7.67	4.313	
Rs.2001 to 5000 (n=32)	6.22	3.974	
Above Rs.5001 (n=3)	4.33	4.041	
Within Groups			
II Physical and Health			
Between Groups			F=.698 .558>0.05 Not Significant
Nil (n=5)	11.40	2.881	
Below Rs.2000 (n=12)	12.08	2.193	
Rs.2001 to 5000 (n=32)	12.81	2.278	
Above Rs.5001 (n=3)	12.33	2.517	
Within Groups			
III External support			
Between Groups			F=2.275 .092>0.05 Not Significant
Nil (n=5)	9.60	2.608	
Below Rs.2000 (n=12)	9.42	3.630	
Rs.2001 to 5000 (n=32)	10.63	2.697	
Above Rs.5001 (n=3)	6.00	5.568	
Within Groups			
IV Care givers routine			
Between Groups			F=1.726 .174>0.05 Not Significant
Nil (n=5)	9.80	1.924	
Below Rs.2000 (n=12)	10.83	1.992	
Rs.2001 to 5000 (n=32)	11.25	1.778	
Above Rs.5001 (n=3)	9.33	1.528	

Within Groups			
V Support of patient			
Between Groups			F=1.511 .224>0.05 Not Significant
Nil (n=5)	8.80	1.924	
Below Rs.2000 (n=12)	9.75	1.913	
Rs.2001 to 5000 (n=32)	10.16	1.588	
Above Rs.5001 (n=3)	8.67	1.155	
Within Groups			
VI Taking Responsibility			
Between Groups			F=.255 .858>0.05 Not Significant
Nil (n=5)	10.20	2.387	
Below Rs.2000 (n=12)	9.42	2.065	
Rs.2001 to 5000 (n=32)	9.84	1.798	
Above Rs.5001 (n=3)	10.00	1.000	
Within Groups			
VII Other relations			
Between Groups			F=.051 .985>0.05 Not Significant
Nil (n=5)	7.00	2.550	
Below Rs.2000 (n=12)	6.83	1.642	
Rs.2001 to 5000 (n=32)	6.72	1.464	
Above Rs.5001 (n=3)	6.67	2.517	
Within Groups			
VIII Patients behaviour			
Between Groups			F=.007 .999>0.05 Not Significant
Nil (n=5)	9.20	2.168	
Below Rs.2000 (n=12)	9.33	2.229	
Rs.2001 to 5000 (n=32)	9.28	1.764	
Above Rs.5001 (n=3)	9.33	.577	
Within Groups			

IX Care givers Strategy			
Between Groups			F=1.199 .320>0.05 Not Significant
Nil (n=5)	8.60	2.408	
Below Rs.2000 (n=12)	9.83	1.642	
Rs.2001 to 5000 (n=32)	9.72	1.397	
Above Rs.5001 (n=3)	8.67	1.155	
Within Groups			
BAS Total			
Between Groups			F=.360 .782>0.05 Not Significant
Nil (n=5)	83.80	17.413	
Below Rs.2000 (n=12)	86.17	14.708	
Rs.2001 to 5000 (n=32)	86.97	12.042	
Above Rs.5001 (n=3)	79.33	11.590	
Within Groups			

The above table reveals that there is no significant difference between care giver income and their opinion about overall BAS score. Hence, the calculated value greater than table value (p>0.05).

Table:8 DISTRIBTION OF CARE GIVER OVERALL BAS SCORE WITH REGARD TO THEIR RELATIONSHIP

Relationship	**Mean**	**S.D**	**Statistical inference**
I Spouse Related			
Between Groups			F=44.702 .000<0.05 Significant
Mother (n=2)	2.00	.000	
Father (n=14)	2.71	2.431	
Brother & sister (n=2)	2.50	.707	
Spouse (n=30)	9.63	1.790	
Relatives (n=4)	2.00	.000	
Within Groups			
II Physical and Health			
Between Groups			F=1.092 .371>0.05 Not Significant
Mother (n=2)	14.50	.707	
Father (n=14)	12.36	2.134	
Brother & sister (n=2)	14.00	1.414	
Spouse (n=30)	12.13	2.389	
Relatives (n=4)	13.75	2.630	
Within Groups			
III External support			
Between Groups			F=1.156 .342>0.05 Not Significant
Mother (n=2)	6.00	8.485	
Father (n=14)	10.00	3.419	
Brother & sister (n=2)	11.00	1.414	
Spouse (n=30)	10.37	2.297	
Relatives (n=4)	8.50	5.745	
Within Groups			
IV Care givers routine			
Between Groups			F=.780 .544>0.05
Mother (n=2)	12.00	1.414	

Father (n=14)	10.79	1.626	Not Significant
Brother & sister (n=2)	11.00	1.414	
Spouse (n=30)	10.70	2.087	
Relatives (n=4)	12.25	.957	
Within Groups			
V Support of patient			
Between Groups			F=.481 .749>0.05 Not Significant
Mother (n=2)	10.50	.707	
Father (n=14)	10.14	1.406	
Brother & sister (n=2)	9.50	2.121	
Spouse (n=30)	9.60	1.923	
Relatives (n=4)	10.50	1.291	
Within Groups			
VI Taking Responsibility			
Between Groups			F=.226 .923>0.05 Not Significant
Mother (n=2)	9.50	.707	
Father (n=14)	10.07	1.492	
Brother & sister (n=2)	10.00	2.828	
Spouse (n=30)	9.60	2.111	
Relatives (n=4)	10.25	1.258	
Within Groups			
VII Other relations			
Between Groups			F=.189 .943>0.05 Not Significant
Mother (n=2)	7.50	.707	
Father (n=14)	6.57	1.158	
Brother & sister (n=2)	7.00	1.414	
Spouse (n=30)	6.83	1.895	
Relatives (n=4)	6.50	1.732	
Within Groups			
VIII Patients behavior			
Between Groups			F=.552

Mother (n=2)	10.50	2.121	.698>0.05 Not Significant
Father (n=14)	8.86	1.351	
Brother & sister (n=2)	9.50	.707	
Spouse (n=30)	9.30	2.103	
Relatives (n=4)	10.00	1.414	
Within Groups			
IX Care givers Strategy			
Between Groups			F=.391 .814>0.05 Not Significant
Mother (n=2)	10.50	.707	
Father (n=14)	9.43	.852	
Brother & sister (n=2)	9.50	2.121	
Spouse (n=30)	9.50	1.834	
Relatives (n=4)	10.25	1.708	
Within Groups			
BAS Total			
Between Groups			F=.546 .703>0.05 Not Significant
Mother (n=2)	89.00	5.657	
Father (n=14)	81.79	10.162	
Brother & sister (n=2)	84.00	7.071	
Spouse (n=30)	87.83	14.914	
Relatives (n=4)	87.00	9.832	
Within Groups			

The above table reveals that there is no significant difference between care giver to the patient's relationship and their opinion about overall BAS scale. Hence, the calculated value greater than table value ($p>0.05$).

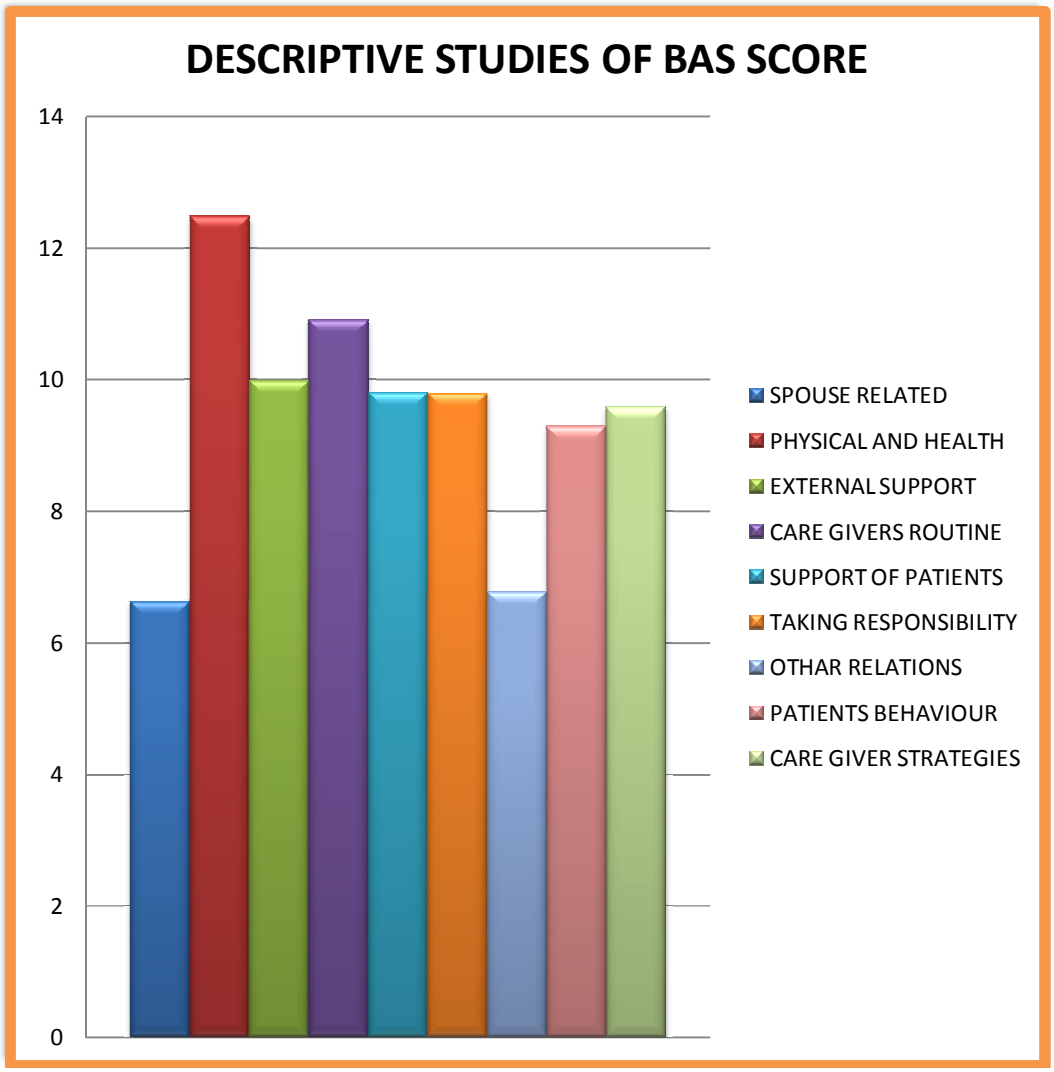

DESCRIPTIVE STUDIES OF BAS SCORE
14
12
10
8
6
4
2
0
SPOUSE RELATED
PHYSICAL AND HEALTH
EXTERNAL SUPPORT
CARE GIVERS ROUTINE
SUPPORT OF PATIENTS
TAKING RESPONSIBILITY
OTHAR RELATIONS
PATIENTS BEHAVIOUR
CARE GIVER STRATEGIES

Table 9 CORRELATION BETWEEN CARE GIVER AGE AND THEIR OPINION ABOUT OVER ALL COPING SCALE

Age	Mean	S.D	Statistical inference
Self-distraction			
Between Groups			F=1.178 .328>0.05 Not Significant
Below 30yrs(n=6)	5.17	1.169	
31 to 40yrs(n=12)	4.42	1.240	
41 to 50yrs(n=12)	4.42	1.240	
51yrs & above(n=22)	4.23	.869	
Within Groups			
Active coping			
Between Groups			F=2.010 .125>0.05 Not Significant
Below 30yrs(n=6)	5.17	.753	
31 to 40yrs(n=12)	5.33	.492	
41 to 50yrs(n=12)	4.83	.835	
51yrs & above(n=22)	4.77	.685	
Within Groups			
Denial			
Between Groups			F=2.248 .095>0.05 Not Significant
Below 30yrs(n=6)	3.83	1.472	
31 to 40yrs(n=12)	3.25	1.055	
41 to 50yrs(n=12)	3.42	1.443	
51yrs & above(n=22)	2.64	1.002	
Within Groups			
Substance use			
Between Groups			F=1.528 .219>0.05 Not Significant
Below 30yrs(n=6)	2.17	.408	
31 to 40yrs(n=12)	3.00	1.537	
41 to 50yrs(n=12)	2.50	.798	
51yrs & above(n=22)	3.14	1.246	

Within Groups			
Use of ES			
Between Groups			F=3.735 .017<0.05 Significant
Below 30yrs(n=6)	4.17	1.329	
31 to 40yrs(n=12)	3.83	1.193	
41 to 50yrs(n=12)	3.25	1.422	
51yrs & above(n=22)	2.68	1.041	
Within Groups			
Use of IS			
Between Groups			F=1.181 .327>0.05 Not Significant
Below 30yrs(n=6)	4.67	.816	
31 to 40yrs(n=12)	4.50	.798	
41 to 50yrs(n=12)	4.33	.778	
51yrs & above(n=22)	4.18	.395	
Within Groups			
Behavioral disengagement			
Between Groups			F=2.793 .050<0.05 Significant
Below 30yrs(n=6)	4.00	1.414	
31 to 40yrs(n=12)	2.50	.905	
41 to 50yrs(n=12)	3.17	1.030	
51yrs & above(n=22)	2.95	1.046	
Within Groups			
Venting			
Between Groups			F=.733 .537>0.05 Not Significant
Below 30yrs(n=6)	4.83	.753	
31 to 40yrs(n=12)	4.58	.996	
41 to 50yrs(n=12)	4.83	1.030	
51yrs & above(n=22)	5.09	.971	
Within Groups			

Positive reframing			
Between Groups			F=.461 .711>0.05 Not Significant
Below 30yrs(n=6)	4.50	.548	
31 to 40yrs(n=12)	4.92	1.084	
41 to 50yrs(n=12)	4.67	.651	
51yrs & above(n=22)	4.82	.733	
Within Groups			
Planning			
Between Groups			F=.269 .848>0.05 Not Significant
Below 30yrs(n=6)	4.83	.983	
31 to 40yrs(n=12)	5.08	.900	
41 to 50yrs(n=12)	4.83	.718	
51yrs & above(n=22)	4.91	.610	
Within Groups			
Humor			
Between Groups			F=.583 .629>0.05 Not Significant
Below 30yrs(n=6)	2.17	.408	
31 to 40yrs(n=12)	2.17	.389	
41 to 50yrs(n=12)	2.17	.389	
51yrs & above(n=22)	2.05	.213	
Within Groups			
Acceptance			
Between Groups			F=.852 .473>0.05 Not Significant
Below 30yrs(n=6)	5.50	1.049	
31 to 40yrs(n=12)	5.25	.965	
41 to 50yrs(n=12)	5.08	1.379	
51yrs & above(n=22)	5.77	1.478	
Within Groups			
Religion			
Between Groups			F=2.026 .123>0.05
Below 30yrs(n=6)	4.83	.983	

31 to 40yrs(n=12)	5.08	1.084	Not Significant
41 to 50yrs(n=12)	4.75	1.545	
51yrs & above(n=22)	5.77	1.343	
Within Groups			
Self-blame			
Between Groups			F=1.238 .306>0.05 Not Significant
Below 30yrs(n=6)	2.17	.408	
31 to 40yrs(n=12)	2.67	.778	
41 to 50yrs(n=12)	2.42	.669	
51yrs & above(n=22)	2.32	.477	
Within Groups			
Coping – Total			
Between Groups			F=.906 .445>0.05 Not Significant
Below 30yrs(n=6)	58.00	4.561	
31 to 40yrs(n=12)	56.58	4.926	
41 to 50yrs(n=12)	54.67	4.697	
51yrs & above(n=22)	55.32	4.314	
Within Groups			

The above table reveals that there is no significant difference between care giver age and their opinion about overall coping scale. Hence, the calculated value greater than table value ($p>0.05$).

Table 10 CORRELATION BETWEEN CARE GIVER GENDER AND THEIR OPINION ABOUT OVER ALL COPING SCALE

Gender	Mean	S.D	Statistical inference
Self-distraction			
Male (n=33)	4.67	1.051	T=2.201 Df=50 .032<0.05 Significant
Female (n=19)	4.00	1.054	
Active coping			
Male (n=33)	4.97	.810	T=.108 Df=50 .915>0.05 Not Significant
Female (n=19)	4.95	.524	
Denial			
Male (n=33)	2.52	.795	T=-5.755 Df=50 .000<0.05 Significant
Female (n=19)	4.11	1.197	
Substance use			
Male (n=33)	3.33	1.267	T=4.569 Df=50 .000<0.05 Significant
Female (n=19)	2.00	.000	
Use of ES			
Male (n=33)	2.58	.936	T=-6.777 Df=50 .000<0.05 Significant
Female (n=19)	4.42	.961	
Use of IS			
Male (n=33)	4.06	.429	T=-5.056 Df=50 .000<0.05 Significant
Female (n=19)	4.84	.688	
Behavioral disengagement			
Male (n=33)	2.94	1.088	T=-.679 Df=50 .500>0.05 Not Significant
Female (n=19)	3.16	1.167	
Venting			
Male (n=33)	4.64	1.025	T=-2.582 Df=50 .013<0.05 Significant
Female (n=19)	5.32	.671	

Positive reframing			
Male (n=33)	4.91	.522	T=1.731 Df=50 .090>0.05 Not Significant
Female (n=19)	4.53	1.073	
Planning			
Male (n=33)	5.12	.545	T=2.710 Df=50 .009<0.05 Significant
Female (n=19)	4.58	.902	
Humor			
Male (n=33)	2.18	.392	T=2.015 Df=50 .049<0.05 Significant
Female (n=19)	2.00	.000	
Acceptance			
Male (n=33)	5.39	1.560	T=-.488 Df=50 .627>0.05 Not Significant
Female (n=19)	5.58	.692	
Religion			
Male (n=33)	5.03	1.468	T=-1.721 Df=50 .092>0.05 Not Significant
Female (n=19)	5.68	1.003	
Self-blame			
Male (n=33)	2.30	.467	T=-1.615 Df=50 .113>0.05 Not Significant
Female (n=19)	2.58	.769	
Coping – Total			
Male (n=33)	54.64	4.547	T=-2.476 Df=50 .017<0.05 Significant
Female (n=19)	57.74	3.970	

The above table reveals that there is a significant difference between care giver gender and their opinion about overall coping scale. Hence, the calculated value less than table value ($p<0.05$).

Table :11 CORRELATION BETWEEN CARE GIVER EDUCATION AND THEIR OPINION ABOUT OVER ALL COPING SCALE

Education qualification	Mean	S.D	Statistical inference
Self-distraction			
Between Groups			F=.220 .926>0.05 Not Significant
Illiterate (n=20)	4.35	1.040	
Primary (n=5)	4.60	1.517	
Middle (n=12)	4.25	1.055	
Hsc (n=13)	4.62	1.193	
UG/PG (n=2)	4.50	.707	
Within Groups			
Active coping			
Between Groups			F=1.226 .313>0.05 Not Significant
Illiterate (n=20)	4.75	.716	
Primary (n=5)	5.00	.707	
Middle (n=12)	5.08	.793	
Hsc (n=13)	5.23	.599	
UG/PG (n=2)	4.50	.707	
Within Groups			
Denial			
Between Groups			F=.565 .689>0.05 Not Significant
Illiterate (n=20)	2.95	1.191	
Primary (n=5)	3.60	1.140	
Middle (n=12)	3.33	1.303	
Hsc (n=13)	2.85	1.214	
UG/PG (n=2)	3.50	2.121	
Within Groups			
Substance use			
Between Groups			F=.541 .706>0.05 Not Significant
Illiterate (n=20)	3.05	1.317	
Primary (n=5)	2.40	.894	

Middle (n=12)	2.58	.793	
Hsc (n=13)	3.00	1.472	
UG/PG (n=2)	2.50	.707	
Within Groups			
Use of ES			
Between Groups			
Illiterate (n=20)	2.95	1.234	
Primary (n=5)	4.20	.837	F=1.027
Middle (n=12)	3.42	1.379	.403>0.05
Hsc (n=13)	3.15	1.345	Not Significant
UG/PG (n=2)	3.50	2.121	
Within Groups			
Use of IS			
Between Groups			
Illiterate (n=20)	4.25	.550	
Primary (n=5)	4.60	.548	F=.595
Middle (n=12)	4.50	.798	.668>0.05
Hsc (n=13)	4.31	.751	Not Significant
UG/PG (n=2)	4.00	.000	
Within Groups			
Behavioral disengagement			
Between Groups			
Illiterate (n=20)	2.90	1.165	
Primary (n=5)	3.00	1.414	F=.108
Middle (n=12)	3.08	.900	.979>0.05
Hsc (n=13)	3.15	1.281	Not Significant
UG/PG (n=2)	3.00	.000	
Within Groups			
Venting			
Between Groups			F=1.858
Illiterate (n=20)	5.30	.865	.134>0.05

Primary (n=5)	5.00	1.225	Not Significant
Middle (n=12)	4.58	.996	
Hsc (n=13)	4.54	.877	
UG/PG (n=2)	4.50	.707	
Within Groups			
Positive reframing			
Between Groups			F=.180 .948>0.05 Not Significant
Illiterate (n=20)	4.70	.733	
Primary (n=5)	4.60	1.140	
Middle (n=12)	4.83	1.030	
Hsc (n=13)	4.85	.555	
UG/PG (n=2)	5.00	.000	
Planning			
Between Groups			F=.635 .340>0.05 Not Significant
Illiterate (n=20)	4.90	.788	
Primary (n=5)	5.20	.837	
Middle (n=12)	4.75	.622	
Hsc (n=13)	5.08	.760	
UG/PG (n=2)	4.50	.707	
Within Groups			
Humor			
Between Groups			F=.663 .621>0.05 Not Significant
Illiterate (n=20)	2.10	.308	
Primary (n=5)	2.00	.000	
Middle (n=12)	2.08	.289	
Hsc (n=13)	2.23	.439	
UG/PG (n=2)	2.00	.000	
Within Groups			
Acceptance			
Between Groups			F=4.691 .003<0.05
Illiterate (n=20)	6.25	.716	

Primary (n=5)	5.60	.548	Significant
Middle (n=12)	4.75	1.485	
Hsc (n=13)	5.08	1.441	
UG/PG (n=2)	4.00	1.414	
Within Groups			
Religion			
Between Groups			F=.830 .513>0.05 Not Significant
Illiterate (n=20)	5.20	1.322	
Primary (n=5)	5.80	1.304	
Middle (n=12)	5.08	1.165	
Hsc (n=13)	5.54	1.561	
UG/PG (n=2)	4.00	1.414	
Within Groups			
Self-blame			
Between Groups			F=.178 .949>0.05 Not Significant
Illiterate (n=20)	2.40	.598	
Primary (n=5)	2.60	.894	
Middle (n=12)	2.33	.492	
Hsc (n=13)	2.38	.650	
UG/PG (n=2)	2.50	.707	
Within Groups			
Coping – Total			
Between Groups			F=.891 .477>0.05 Not Significant
Illiterate (n=20)	56.05	3.517	
Primary (n=5)	58.20	3.421	
Middle (n=12)	54.67	5.694	
Hsc (n=13)	56.00	5.132	
UG/PG (n=2)	52.00	5.657	
Within Groups			

The above table reveals that there is no significant difference between care giver education and their opinion about overall coping score. Hence, the calculated value greater than table value ($p>0.05$).

Table :12 CORRELATION BETWEEN CARE GIVER OCCUPATION AND THEIR OPINION ABOUT OVER ALL COPING SCALE

Occupation	Mean	S.D	Statistical inference
Self-distraction			
Between Groups			F=.717 .546>0.05 Not Significant
Unemployed(n=5)	3.80	1.304	
Unskilled(n=23)	4.39	1.118	
Semi-Skilled(n=3)	4.67	1.528	
Others(n=21)	4.57	.978	
Within Groups			
Active coping			
Between Groups			F=1.143 .341>0.05 Not Significant
Unemployed(n=5)	5.00	.000	
Unskilled(n=23)	4.96	.767	
Semi-Skilled(n=3)	5.67	.577	
Others(n=21)	4.86	.727	
Within Groups			
Denial			
Between Groups			F=3.793 .016<0.05 Significant
Unemployed(n=5)	4.20	.447	
Unskilled(n=23)	3.22	1.313	
Semi-Skilled(n=3)	4.00	2.000	
Others(n=21)	2.57	.870	
Within Groups			
Substance use			
Between Groups			F=1.046 .381>0.05 Not Significant
Unemployed(n=5)	2.00	.000	
Unskilled(n=23)	2.91	1.443	
Semi-Skilled(n=3)	3.33	2.309	

Others(n=21)	2.90	.768	
Within Groups			
Use of ES			
Between Groups			
Unemployed(n=5)	5.00	.000	
Unskilled(n=23)	3.39	1.118	F=10.701 .000<0.05 Significant
Semi-Skilled(n=3)	4.67	1.528	
Others(n=21)	2.48	.981	
Within Groups			
Use of IS			
Between Groups			
Unemployed(n=5)	5.00	.707	
Unskilled(n=23)	4.43	.590	F=6.253 .001<0.05 Significant
Semi-Skilled(n=3)	5.00	1.000	
Others(n=21)	4.00	.447	
Within Groups			
Behavioral disengagement			
Between Groups			
Unemployed(n=5)	2.80	1.304	
Unskilled(n=23)	2.91	1.164	F=.492 .690>0.05 Not Significant
Semi-Skilled(n=3)	3.67	1.528	
Others(n=21)	3.10	.995	
Within Groups			
Venting			
Between Groups			
Unemployed(n=5)	5.20	.447	
Unskilled(n=23)	5.04	.976	F=.930 .433>0.05 Not Significant
Semi-Skilled(n=3)	5.00	1.000	
Others(n=21)	4.62	1.024	
Within Groups			
Positive reframing			

Between Groups			F=2.285 .091>0.05 Not Significant
Unemployed(n=5)	5.40	.894	
Unskilled(n=23)	4.57	.843	
Semi-Skilled(n=3)	4.33	.577	
Others(n=21)	4.90	.625	
Within Groups			
Planning			
Between Groups			F=1.284 .290>0.05 Not Significant
Unemployed(n=5)	5.40	.894	
Unskilled(n=23)	4.74	.864	
Semi-Skilled(n=3)	5.00	1.000	
Others(n=21)	5.00	.447	
Within Groups			
Humor			
Between Groups			F=.769 .517>0.05 Not Significant
Unemployed(n=5)	2.00	.000	
Unskilled(n=23)	2.09	.288	
Semi-Skilled(n=3)	2.00	.000	
Others(n=21)	2.19	.402	
Within Groups			
Acceptance			
Between Groups			F=.332 .802>0.05 Not Significant
Unemployed(n=5)	5.60	.548	
Unskilled(n=23)	5.61	1.118	
Semi-Skilled(n=3)	5.67	.577	
Others(n=21)	5.24	1.670	
Within Groups			
Religion			
Between Groups			F=1.014 .395>0.05 Not Significant
Unemployed(n=5)	5.60	1.140	
Unskilled(n=23)	5.30	1.063	

Semi-Skilled(n=3)	6.33	1.528	
Others(n=21)	5.00	1.612	
Within Groups			
Self-blame			
Between Groups			
Unemployed(n=5)	2.80	1.095	
Unskilled(n=23)	2.43	.590	F=1.025 .390>0.05 Not Significant
Semi-Skilled(n=3)	2.33	.577	
Others(n=21)	2.29	.463	
Within Groups			
Coping - Total			
Between Groups			
Unemployed(n=5)	59.80	3.271	
Unskilled(n=23)	56.00	3.966	F=5.609 .002<0.05 Significant
Semi-Skilled(n=3)	61.67	1.155	
Others(n=21)	53.71	4.440	
Within Groups			

The above table reveals that there is a significant difference between care giver occupation and their opinion about overall coping. Hence, the calculated value less than table value ($p<0.05$).

Table :13 CORRELATION BETWEEN CARE GIVER INCOME AND THEIR OPINION ABOUT OVER ALL COPING SCALE

Income	Mean	S.D	Statistical inference
Self-distraction			
Between Groups			F=1.439 .243>0.05 Not Significant
Nil (n=5)	3.80	1.304	
Below Rs.2000 (n=12)	4.17	1.030	
Rs.2001 to 5000 (n=32)	4.66	1.096	
Above Rs.5001 (n=3)	4.00	.000	
Within Groups			
Active coping			
Between Groups			F=.901 .448>0.05 Not Significant
Nil (n=5)	5.00	.000	
Below Rs.2000 (n=12)	4.67	.492	
Rs.2001 to 5000 (n=32)	5.06	.840	
Above Rs.5001 (n=3)	5.00	.000	
Within Groups			
Denial			
Between Groups			F=4.290 .009<0.05 Significant
Nil (n=5)	4.20	.447	
Below Rs.2000 (n=12)	3.67	1.435	
Rs.2001 to 5000 (n=32)	2.81	1.091	
Above Rs.5001 (n=3)	2.00	.000	
Within Groups			
Substance use			
Between Groups			F=2.075 .116>0.05 Not Significant
Nil (n=5)	2.00	.000	
Below Rs.2000 (n=12)	2.42	.793	
Rs.2001 to 5000 (n=32)	3.13	1.338	
Above Rs.5001 (n=3)	3.00	1.000	

Within Groups			
Use of ES			
Between Groups			F=8.884 .000<0.05 Significant
Nil (n=5)	5.00	.000	
Below Rs.2000 (n=12)	3.92	1.311	
Rs.2001 to 5000 (n=32)	2.84	1.081	
Above Rs.5001 (n=3)	2.00	.000	
Within Groups			
Use of IS			
Between Groups			F=2.413 .078>0.05 Not Significant
Nil (n=5)	5.00	.707	
Below Rs.2000 (n=12)	4.42	.793	
Rs.2001 to 5000 (n=32)	4.25	.568	
Above Rs.5001 (n=3)	4.00	.000	
Within Groups			
Behavioral disengagement			
Between Groups			F=.205 .893>0.05 Not Significant
Nil (n=5)	2.80	1.304	
Below Rs.2000 (n=12)	3.00	1.044	
Rs.2001 to 5000 (n=32)	3.09	1.174	
Above Rs.5001 (n=3)	2.67	.577	
Within Groups			
Venting			
Between Groups			F=2.939 .043<0.05 Significant
Nil (n=5)	5.20	.447	
Below Rs.2000 (n=12)	5.50	.522	
Rs.2001 to 5000 (n=32)	4.63	1.040	
Above Rs.5001 (n=3)	4.67	1.155	
Within Groups			
Positive reframing			
Between Groups			F=1.386

Nil (n=5)	5.40	.894	.259>0.05 Not Significant
Below Rs.2000 (n=12)	4.67	.888	
Rs.2001 to 5000 (n=32)	4.69	.738	
Above Rs.5001 (n=3)	5.00	.000	
Within Groups			
Planning			
Between Groups			F=2.309 .088>0.05 Not Significant
Nil (n=5)	5.40	.894	
Below Rs.2000 (n=12)	4.50	.674	
Rs.2001 to 5000 (n=32)	5.00	.718	
Above Rs.5001 (n=3)	5.00	.000	
Within Groups			
Humor			
Between Groups			F=.537 .659>0.05 Not Significant
Nil (n=5)	2.00	.000	
Below Rs.2000 (n=12)	2.08	.289	
Rs.2001 to 5000 (n=32)	2.16	.369	
Above Rs.5001 (n=3)	2.00	.000	
Within Groups			
Acceptance			
Between Groups			F=1.323 .278>0.05 Not Significant
Nil (n=5)	5.60	.548	
Below Rs.2000 (n=12)	5.92	.793	
Rs.2001 to 5000 (n=32)	5.38	1.408	
Above Rs.5001 (n=3)	4.33	2.309	
Within Groups			
Religion			
Between Groups			F=1.998 .127>0.05 Not Significant
Nil (n=5)	5.60	1.140	
Below Rs.2000 (n=12)	5.75	1.055	
Rs.2001 to 5000 (n=32)	4.94	1.243	

Above Rs.5001 (n=3)	6.33	2.887	
Within Groups			
Self-blame			
Between Groups			F=.834 .482>0.05 Not Significant
Nil (n=5)	2.80	1.095	
Below Rs.2000 (n=12)	2.42	.669	
Rs.2001 to 5000 (n=32)	2.34	.483	
Above Rs.5001 (n=3)	2.33	.577	
Within Groups			
Coping – Total			
Between Groups			F=2.796 .050>0.05 Not Significant
Nil (n=5)	59.80	3.271	
Below Rs.2000 (n=12)	57.08	2.610	
Rs.2001 to 5000 (n=32)	54.97	4.863	
Above Rs.5001 (n=3)	52.33	5.132	
Within Groups			

The above table reveals that there is no significant difference between care giver income and their opinion about overall coping scale. Hence, the calculated value greater than table value (p>0.05).

Table:14 CORRELATION BETWEEN CARE GIVER RELATIONSHIP AND THEIR OPINION ABOUT OVER ALL COPING SCALE

Relationship	Mean	S.D	Statistical inference
Self-distraction			
Between Groups			F=4.835 .002<0.05 Significant
Mother (n=2)	3.50	.707	
Father (n=14)	4.00	.679	
Brother & sister (n=2)	7.00	.000	
Spouse (n=30)	4.50	1.106	
Relatives (n=4)	4.50	.577	
Within Groups			
Active coping			
Between Groups			F=3.329 .018<0.05 Significant
Mother (n=2)	5.00	.000	
Father (n=14)	4.50	.760	
Brother & sister (n=2)	6.00	.000	
Spouse (n=30)	5.10	.607	
Relatives (n=4)	5.00	.816	
Within Groups			
Denial			
Between Groups			F=1.209 .319>0.05 Not Significant
Mother (n=2)	3.00	1.414	
Father (n=14)	2.57	.852	
Brother & sister (n=2)	3.00	.000	
Spouse (n=30)	3.40	1.380	
Relatives (n=4)	2.75	.957	
Within Groups			
Substance use			
Between Groups			F=.364

Mother (n=2)	2.00	.000	.833>0.05 Not Significant
Father (n=14)	2.86	.949	
Brother & sister (n=2)	3.00	1.414	
Spouse (n=30)	2.93	1.388	
Relatives (n=4)	2.50	.577	
Within Groups			
Use of ES			
Between Groups			F=2.472 .057>0.05 Not Significant
Mother (n=2)	3.00	1.414	
Father (n=14)	2.43	1.089	
Brother & sister (n=2)	3.00	.000	
Spouse (n=30)	3.67	1.213	
Relatives (n=4)	3.25	1.893	
Within Groups			
Use of IS			
Between Groups			F=1.225 .313>0.05 Not Significant
Mother (n=2)	4.50	.707	
Father (n=14)	4.14	.363	
Brother & sister (n=2)	4.00	.000	
Spouse (n=30)	4.50	.731	
Relatives (n=4)	4.00	.816	
Within Groups			
Behavioral disengagement			
Between Groups			F=1.277 .292>0.05 Not Significant
Mother (n=2)	3.50	2.121	
Father (n=14)	2.71	.726	
Brother & sister (n=2)	2.00	.000	
Spouse (n=30)	3.10	1.213	
Relatives (n=4)	3.75	.957	
Within Groups			
Venting			

Between Groups			F=1.931 .121>0.05 Not Significant
Mother (n=2)	6.00	.000	
Father (n=14)	5.14	.949	
Brother & sister (n=2)	4.00	.000	
Spouse (n=30)	4.83	.986	
Relatives (n=4)	4.25	.500	
Within Groups			
Positive reframing			
Between Groups			F=.220 .926>0.05 Not Significant
Mother (n=2)	4.50	.707	
Father (n=14)	4.79	.426	
Brother & sister (n=2)	5.00	.000	
Spouse (n=30)	4.80	.961	
Relatives (n=4)	4.50	.577	
Within Groups			
Planning			
Between Groups			F=1.309 .280>0.05 Not Significant
Mother (n=2)	5.00	.000	
Father (n=14)	5.00	.000	
Brother & sister (n=2)	6.00	.000	
Spouse (n=30)	4.83	.913	
Relatives (n=4)	4.75	.500	
Within Groups			
Humor			
Between Groups			F=5.841 .001<0.05 Significant
Mother (n=2)	2.00	.000	
Father (n=14)	2.07	.267	
Brother & sister (n=2)	3.00	.000	
Spouse (n=30)	2.07	.254	
Relatives (n=4)	2.25	.500	
Within Groups			

Acceptance			
Between Groups			F=1.249 .304>0.05 Not Significant
Mother (n=2)	6.00	1.414	
Father (n=14)	5.79	1.477	
Brother & sister (n=2)	4.00	.000	
Spouse (n=30)	5.47	1.224	
Relatives (n=4)	4.75	1.258	
Within Groups			
Religion			
Between Groups			F=.772 .549>0.05 Not Significant
Mother (n=2)	5.50	.707	
Father (n=14)	5.57	1.555	
Brother & sister (n=2)	4.00	.000	
Spouse (n=30)	5.27	1.311	
Relatives (n=4)	4.75	1.258	
Within Groups			
Self-blame			
Between Groups			F=.787 .540>0.05 Not Significant
Mother (n=2)	2.00	.000	
Father (n=14)	2.29	.469	
Brother & sister (n=2)	2.00	.000	
Spouse (n=30)	2.50	.682	
Relatives (n=4)	2.50	.577	
Within Groups			
Coping – Total			
Between Groups			F=1.429 .239>0.05 Not Significant
Mother (n=2)	55.50	2.121	
Father (n=14)	53.86	3.060	
Brother & sister (n=2)	56.00	1.414	
Spouse (n=30)	56.97	5.014	
Relatives (n=4)	53.50	5.447	
Within Groups			

The above table reveals that there is no significant difference between care giver to the patient's relationship and their opinion about overall coping scale. Hence, the calculated value greater than table value ($p>0.05$).

DESCRIPTIVE STATISTICS

Item	Min.	Max.	Mean	S.D
Self-distraction	3	7	4.42	1.091
Active coping	3	6	4.96	.713
Denial	2	6	3.10	1.225
Substance use	2	6	2.85	1.195
Use of ES	2	6	3.25	1.297
Use of IS	3	6	4.35	.653
Behavioral disengagement	2	6	3.02	1.111
Venting	3	6	4.88	.963
Positive reframing	3	7	4.77	.783
Planning	3	6	4.92	.737
Humor	2	3	2.12	.323
Acceptance	3	7	5.46	1.306
Religion	2	8	5.27	1.345
Self-blame	2	4	2.40	.603
Coping – Total	**47**	**65**	**55.77**	**4.562**

The above table indicates that self-distraction mean value is 4.42, 4.96 mean value is active coping, 3.10 mean value denial, 2.85 mean value is substance use, use of ES mean value is 3.25, 4.35 mean value is use of IS, 3.02 mean value is behavioural disengagement, 4.88 mean value is venting dimensions 4.77 mean value is positive reframing, 4.92 mean value is planning and finally overall coping scale mean value is 55.77.

Table:16 CORRELATION BETWEEN CARE GIVER SOCIODEMOGRAPHIC DATA AND PGWI SCORE

Vitality						
Between Groups			20.124	3	6.708	F=3.605 .020<0.05 **Significant**
Below 30yrs(n=6)	10.83	2.041				
31 to 40yrs(n=12)	9.00	1.206				
41 to 50yrs(n=12)	8.67	.888				
51yrs & above(n=22)	9.09	1.444				
Within Groups			89.318	48	1.861	

OVER ALL, NO SIGNIFICANT DIFFERENCE BETWEEN CAREGIVER SOCIODEMOGRAPHIC VARIABLES EXCEPT VITALITY IN RELATIONSHIP WITH AGE.

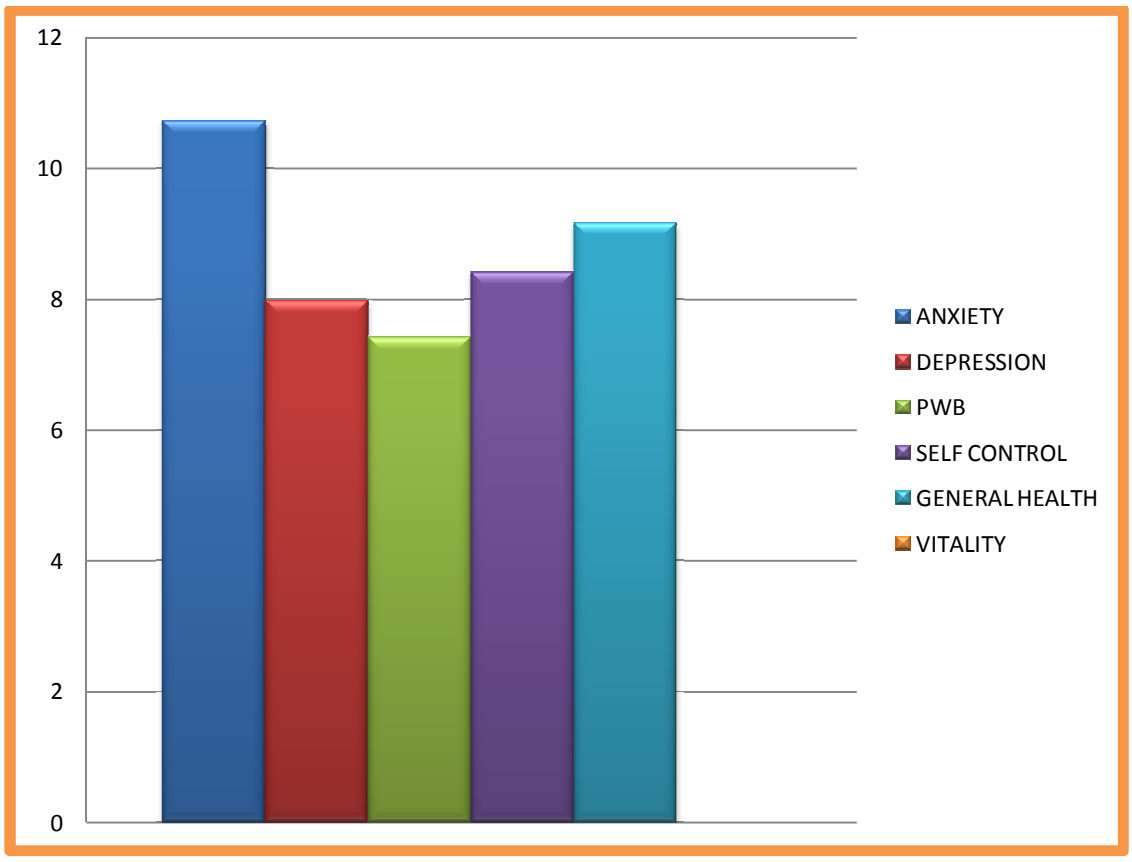


Table :17 CORRELATION BETWEEN BAS , PSYCHOLOGICAL WELL BEING AND COPING

	BAS Total	PGW-Total	Coping - Total
BAS Total	1	-.913(**)	.144
PGW-Total	-.913(**)	1	-.210
Coping - Total	.144	-.210	1
N	52	52	52

** Correlation is significant at the 0.01 level

DISCUSSION

The study was carried out on 52 primary caregivers of persons with BPAD attending the psychiatry outpatient department at Thanjavur Medical College Hospital, Thanjavur.

This study was done in caregivers of BPAD to assess their level of burden, psychological wellbeing and the coping strategies.

SOCIODEMOGRAPHIC PROFILE OF THE PATIENT

The mean age of presentation was 25 years (ranging from 21 to 30 years) with the majority belonging to male gender(61.5%),married, of Hindu religion, from the rural background, having mean education of higher secondary and unemployed or housewife by occupation .

SOCIODEMOGRAPHIC PROFILE OF THE CAREGIVERS

In the present study, the mean age of the caregivers was 51 years and above (42.3%). The majority of caregivers were male, married and from rural areas. Most of them were either spouse or parents of the patients, whereas the rest were offspring, siblings or other relatives. Parents were significantly older than spouses. Most of the caregivers were illiterate (38.5%), higher secondary, whereas the rest had education up to primary and middle standards or graduates. In addition, the majority of caregivers

were unskilled (44.2%), farmers (40.4%), semiskilled (5.8%) and housewives.

BURDEN

Caregivers in this group experienced significant levels of burden and distress. The differences in mean scores across different BAS types were found to be statistically significant. Higher mean score is recorded for physical and mental health followed by care givers routine, external support, support of patient, taking responsibility, other relations, and care giver strategies respectively.

Providing care for the patient with bipolar disorder has had a detrimental impact on the caregivers own health and caregivers reported that they spent less time on taking care of their own health due to increased involvement in caring for the patient.

Main adverse effects of caregiver's burden mainly affect their own physical and mental health, which have been reported in research literature on caregivers in both the Indian context[97-99]as well as in western settings.[100]

Further analysis revealed that the female gender of spouses contributed significantly to the burden in the following areas, caregiver's routine, taking responsibility, patient's behavior and other relations.

Lawton et al. (1989) used the term caregiving appraisal and measured caregiving appraisal by analyzing the responses of caregivers, and defined three clear dimensions which include subjective burden, objective burden and caregiver satisfaction and he was more concentrated on problem solving aspect.

Thompson and Doll (1982) studied a significant relationship between objective and subjective burden, in most families a disparity suggested that some families did show resilience, in that high objective burden did not necessarily result in, or was not necessarily associated with high subjective burden. This resilience may have been experienced as reduced burden or as reward in caregiving.

Subjective burden has been found to be a more powerful predictor of distress than the patient's symptomatology or the objective burden of the caregiver (Noh & Avisan 1988).[101]

Analysis of further variables revealed that there was no difference in the burden across variables and this could not be compared with other studies, as there is paucity of literature in this area.

COPING

The coping strategies used by caregivers of bipolar patients in handling the stress of caring for a mentally ill relative were assessed in

order to understand their impact on perceived burden and psychological wellbeing. The group as a whole reported greater use of emotion focused coping strategies such as acceptance and religion. Care giving for a mentally ill relative is an enduring stressor, and emotion focused coping strategies, which help in reducing distress are most likely to be adopted. Research has highlighted the use of these strategies in situations which require adjustment to ongoing stress. The literature on caregivers has reported similar findings on caregiver coping strategies.

No statistically significant difference was observed between different age groups, males and females, occupation, income and residence with respect to the mean coping, problem solving, positive distraction, denial and social support. However males were using more problem solving and negative distraction as a coping strategy than females. Female caregivers were using more denial and Religion as coping strategies than males the mean score for religion was found to be higher in older age group (>50 years) compared to the younger age group.

Self-distraction and substance use were significantly in males and denial, use of IS , use of ES and venting were found to be higher in females.

Acceptance was significantly high in caregivers with higher education and who were low wage earners.

Negative distraction strategies such as use of alcohol, or tobacco, constitute culturally acceptable ways of coping for males. Female were higher on denial, confirming the finding of an earlier study by Ram Mohan Rao and Subbakrishna, 2002b. Female caregivers therefore have great difficulty in dealing with disability caused by the illness and were likely to use avoidance as a way of handling the situation.

In overall descriptive statistics of coping, higher mean score is recorded for acceptance followed by religion, active coping, planning and venting respectively.

No statistically significant difference was observed between various coping strategies and duration of care.

PSYCHOLOGICAL WELLBEING

No statistically significant difference was observed between socio demographic variables in terms of age groups, gender, education, occupation, and residence with respect to the mean psychological wellbeing score.

Despite significant improvement in pharmacotherapy, bipolar disorder still causes difficulties for the patients, their families, and the society. This research would explore the level of burden they experience, how they adapt and cope with the burden. The available data suggests combining pharmacological treatment with psychoeducational family intervention to achieve comprehensive, good long term outcome. In particular this combined therapy reduce subjective burden on relatives, reduces relapses and hospital admissions, improve coping strategies and social functioning and increases compliance to pharmacological treatment.

CONCLUSION

This cross sectional study was done to assess the family burden, psychological well-being and the coping style used by the caregivers of Bipolar disorders. They were administered The Burden Assessment Scale, Brief cope scale, and Psychological Well Being index scale.

The patients in this group were in their early thirties and with an average duration of illness (5years). The caregivers were predominantly from a low socioeconomic background, with low levels of education. In our study most of the caregivers were spouses rather than parents.

In this study significant levels of burden were found among caregivers and Burden was greatest in the areas of caregivers' physical and mental health and external support. Patients' demographic characteristics, symptom profile and caregiver demographic characteristics have influenced burden. Caregivers who were of elderly age group, females, less educated and from lower socioeconomic status have experienced greater burden. The results on coping strategies used by caregivers in handling the stress of caring for a family member with bipolar indicate that emotion focused coping was

more predominant. The coping strategies utilized varied, based on caregiver demographic characteristics. Caregivers who were old and from a lower educational and income background were higher on religious coping , while caregivers who were female were higher on denial. Caregivers who were males were higher on problem solving and negative distraction. Psychological wellbeing was low in older age group, parents and females caregivers.

The main inference of our study was Significant demands are being placed on the caregivers of BPAD patients, but still researches targeting this aspect were very few. Future studies has to be focused on these aspect of caregivers burden as they play an important role in the prognosis and outcome of chronic mentally ill patients like BPAD

.

LIMITATIONS

1. The present study was done in a tertiary hospital, in an urban setting and hence the results cannot be generalized to the population at large.

2. The study has been primarily cross sectional in nature.

3. The sample population was small in number.

BIBILIOGRAPHY

1. Investing in mental health World Health Organization Report. Investing mental health,2003, retrieved from http://www.who.int /mental_health/ media/ investing_mnh.pdf
2. Wyatt RJ, 21 Perlick DA, Rosenheck RA, Miklowitz DJ, et al. STEP-BDFamily Experience Collaborative Study Group. Prevalenceand correlates of burden among caregivers of patients withbipolar disorder enrolled in the Systematic Treatment EnhancementProgram for Bipolar Disorder. Bipolar Disord
3. Perlick DA, Hohenstein JM, Clarkin JF, Kaczynski R, Rosenhech R.useof mental health and primary care services by caregivers of patients with bipolar disorder; a preliminary study. Bipolar disorders 2005; 7; 126-135
4. Pini S, de Queiroz V, Pagnin D, Pezawas L, Angst J, Casssano GB, et al. prevalence and burden of Bipolar disorders in European countries. European Neuropsychoharmacology 2005; 15;425-434
5. Reinares M, Vieta E, Colom F, et al. What really matters to bipolar patients' caregivers: sources of family burden. J Affect Disorder 2006; 94:157-63.
6. Reddy MV, Chandershekran CR (1998) Prevalence of mental and behavioural disorders in India: a meta-analysis. Indian J Psychiatry 40(2):149-57
7. Singh A, Nizamie SH. Disability: The concept and related Indian legislations. Mental Health Reviews; 2004.Available from URL://www.psyplexus.com/ mhr/ disability_india.html.Accessed on November 20, 2006.
8. World Health Organization, Burden of Mental and Behavioral Disorders, The World Health Report, Mental health: New understanding, New hope Geneva, World Health Organization 2001.
9. Judd LL, Akiskal HS, Schettler JP, Endicott AC, Leon. CA, Soloman AD et al. Psychosocial Disability in the course of Bipolar I and II Disorders, A Prospective, Comparative, Longitudinal Study. Arch Gen Psychiatry 2005; 62:1322-1330.
10. Chaudhury K, Deka K, Chetia D. Disability associated with mental disorders. Indian J Psychiatry 2006; 48:95–101.

11. Murray CLJ, Lopez AD. The global burden of disease: acomprehensive assessment of mortality and disability fromdiseases, injuries, and risk factors in 1990 and projected to2020. Boston: Harvard University Press 1996.
12. Reinares M, Vieta E, Colom F, et al. What really matters tobipolar patients' caregivers: sources of family burden. J AffectDisorder 2006; 94:157-63.
13. Miklowitz DJ, Otto MW, Frank E, et al. Intensive psychosocialintervention enhances functioning in patients with bipolardepression: results from a 9-month randomized controlledtrial. Am J Psychiatry 2007; 164:1340-7.
14. Rouget BW, Aubry JM. Efficacy of psychoeducational approacheson bipolar disorders: a review of the literature. JAffect Disord 2007; 98:11-27.
15. Gitlin MJ, Swendsen J, Heller TL, et al. Relapse and impairmentin bipolar disorder. Am J Psychiatry 1995; 152:1635-40.
16. Ball JR, Mitchell PB, Corry JC, et al. A randomized controlledtrial of cognitive therapy for bipolar disorder: Focuson long-term change. J Clin Psychiatry 2006;67:277-86.
17. Blairy S, Linottea S, Souerya D. Social adjustment and self-esteemof bipolar patients: a multicentric study. J Affect Disord 2004; 79:97-103.
18. Dion GL, Tohen M, Anthony WA, et al. Symptoms and functioning of patients with bipolar disorder six months after hospitalization. Hosp Community Psychiatry 1988; 39:652-7.
19. MichalakEE, Yatham LN, Lam RW. The role of psychoeducation in the treatment of bipolar disorder: A clinical perspective. Clin Approach Bipolar Disord 2004;3:5-11.
20. Strakowski SM, Keck PE, McElroy SL, et al. Twelve-month outcome after a first hospitalization for affective psychosis. Arch Gen Psychiatry 1998;55:49-55.
21. Jamison KR, Baldessarini RJ. Effects of medical interventions on suicidal behavior. J Clin Psychiatry 1999;60:4-6.
22. Kochanek KD, Murphy SL, Anderson RN, et al. Deaths: final data for 2002. Nat Vital Stat Rep 2004;53:1-115
23. Harris EC, Barraclough B. Suicide as an outcome for mental disorders: a meta-analysis. Br J Psychiatry 1997; 170:205-8.
24. Miklowitz DJ, Johnson SL. The psychopathology and treatment of bipolar disorder. Annu Rev Clin Psychol2006; 2:199-235.

25. Perlick DA, Rosenheck RA, Miklowitz DJ, et al. STEP-BD Family Experience Collaborative Study Group. Prevalence and correlates of burden among caregivers of patients with bipolar disorder enrolled in the Systematic Treatment Enhancement Program for Bipolar Disorder. Bipolar Disord 2007; 9:262-73.
26. Hoenig J. and Hamilton M. The schizophrenic patient and his effect on the household. International Journal of Social Psychiatry.1966; 12: 165-176
27. Ostman, M. and L. Hansson. Appraisal of caregiving, burden and psychological distress in relatives of psychiatric inpatients. European Psychiatry.2004; 19: 402 -407.
28. Bhaskaran K. The unwanted patient. Indian J Psychiatry. 1970;12:1–12.
29. Gupta SP, Yadav BS, Bharadwaj RC, Sharma RP. Psychosocial problems of long stay mental patients. Indian J Psychiatry. 1980;22:251–5. [PMCID: PMC3013210]
30. New Delhi: National Human Rights Commission; 1999. National Human Rights Commission: Quality Assurance in Mental.
31. Thara R, Padmavati R, Kumar S, Srinivasan L. Burden Assessment Schedule. Instrument to assess burden on caregivers of the chronically mentally ill. Indian Journal of Psychiatry. 1998; 40: 21-9
32. A glossary of terms for Community health care and services: WHO Centre for health development: WHO:2005; 5.
33. Magliano L., McDaid D., Kirkwood S. and Berzins K. Carers and families of people with mental health problems. In: Mental health policy and practice across Europe (eds). M. Knapp, D. McDaid, E. Mossialos, G.Thornicroft), pp. 374-396, McGraw-Hill: Berkshire.2007.
34. Miller IW, Keitner GI, Ryan CE, et al. Family treatment for bipolar disorder: family impairment by treatment interactions. J Clin Psychiatry 2008;69:732-40.
35. Amirkhanyan,A.A.,&wolf,D.A.caregiver stress and non-caregiver stress; Exploring the pathways of psychiatric morbidity.Gerontologist.2003;43,817-827
36. Pearlin,L.I.Role strains and personal stress. In Kaplan, H.B. (ed.), Psychosocial stress: Trends in Theory and Research, Academic Press, New York, pp.3-32.1983.
37. Gruetzner, H.M. Alzheimer's: A Caregiver's Guide and Sourcebook. Wiley.2001

38. Claudia Baldassano, MD: "Reducing the Burden of Bipolar Disorder for Patient and Caregiver," Medscape Psychiatry & Mental Health 9(2), 2004. Available at http://www.medscape.com/viewarticle/493650_print, accessed January 4, 2006.
39. Williamson, G.M.,& Schulz, R. Coping with specific stressors in Alzheimer's Disease caregiving. The Geronotologist.1993;33, 747-755.
40. McDonell M.G ., Short R.A ., Berry C.M ., Dyck D.G. Burden in Schizophrenia Caregivers: Impact of Family Psychoeducation and Awareness of Patient Suicidality. Family Process.2003; Vol. 42, No. 1
41. Schizophrenia and public health: Division of Mental Health and Prevention of Substance Abuse. World Health Organization. Geneva.2000.
42. Leff J, Wig NN, Bedi H, Menon DK, Kuipers L, Korten A, et al. Relatives' expressed emotion and the course of schizophrenia in Chandigarh. A two year follow-up of a first contact sample. Br J Psychiatry. 1990;156:351–6. [PubMed: 2346833]
43. Sethi BB, Chaturvedi PK. A review and role of family studies and mental health. Indian J Soc Psychiatry. 1985;1:216–30.
44. Bharat S. Research on family structure and problems: review, implications and suggestions. In: Bharat S, editor. Research on Families with Problems in India: Issues and Implications. Vol 1. Bombay: Tata Institute of Social Sciences; 1991. pp. 33–67.
45. Chandrashekar CR, Rao NV, Murthy RS. The chronic mentally ill and their families. In: Bharat S, editor. Research on Families with Problems in India: Issues and Implications. Vol 1. Bombay: Tata Institute of Social Sciences; 1991. pp. 113–20.
46. Miklowitz, D. J. (2008b). Bipolar disorder : A family-focused treatment approach. (2th), Guilford Press, ISBN 978-1-59385-655-7, United States of America.
47. Morris, C. D., & Miklowitz, D. & waxmonsky, J. (2007) family approaches to the course and treatment of bipolar disorder. In *The Psychology of Bipolar Disorder: New Developments and Research Strategies* (S. Jones, Ed.). London: Oxford University Press.

48. Sullivan, A. E. & Miklowitz, D. J. (Feb 2010).Family functioning among adolescents with bipolar disorder. Journal of Family Psychology, Vol. 24, No. 1, pp. 60-7, ISSN 08933200
49. Priebe, S.; Wildgrube, C. & Muller-Oerlinghausen, B. (1989). Lithium prophylaxis and expressed emotion. British Journal of Psychiatry, Vol. 154, pp. 396–399, ISSN 0007-1250
50. Butzlaff, R. L.; & Hooley, J. M. (1998). Expressed emotion and psychiatric relapse: A meta-analysis. Archives of General Psychiatry, Vol. 55, pp. 547–552 ISSN 0003990X
51. Perlick DA, Rosenheck RA, Miklowitz DJ, Chessick C, Wolff N, Kaczynski R, et al. Prevalence and correlates of burden among caregivers of patients with bipolar disorder enrolled in the Systematic Treatment Enhancement Program for Bipolar Disorder. Bipolar Disord. 2007; 9(3): 262–273. Epub 2007/04/14.
52. Cuijpers P. The effects of family interventions on relatives' burden: a meta-analysis. Journal of mental health. 1999; 8(3): 275–285.
53. Chadda RK, Singh TB, Ganguly KK. Caregiver burden and coping: a prospective study of relationship between burden and coping in caregivers of patients with schizophrenia and bipolar affective disorder. Soc Psychiatry Psychiatr Epidemiol. 2007; 42(11): 923–930. Epub 2007/08/19.
54. Perlick D, Clarkin JF, Sirey J, Raue P, Greenfield S, Struening E, et al. Burden experienced by care–givers of persons with bipolar affective disorder. Br J Psychiatry. 1999; 175: 56–62. Epub 2000/01/06.
55. Ogilvie AD, Morant N, Goodwin GM. The burden on informal caregivers of people with bipolar disorder. Bipolar Disord. 2005; 7 Suppl 1: 25–32. Epub 2005/03/15.
56. Reinares M, Vieta E, Colom F, Martinez-Aran A, Torrent C, Comes M, et al. What really matters to bipolar patients' caregivers: sources of family burden. J Affect Disord. 2006; 94(1–3): 157–163. Epub 2006/06/02.
57. Bauer R, Gottfriedsen GU, Binder H, Dobmeier M, Cording C, Hajak G, et al. Burden of caregivers of patients with bipolar affective disorders. Am J Orthopsychiatry. 2011; 81(1): 139–148. Epub 2011/01/12.

58. Van der Voort TY, Goossens PJ, van der Bijl JJ. Alone together: A grounded theory study of experienced burden, coping, and support needs of spouses of persons with a bipolar disorder. Int J Ment Health Nurs. 2009; 18(6): 434–443. Epub 2009/11/04.

59. Perlick DA, Rosenheck RA, Miklowitz DJ, Chessick C, Wolff N, Kaczynski R, Ostacher M, Patel J, Desai R. Prevalence and correlates of burden among caregivers of patients with bipolar disorder enrolled in the Systematic Treatment Enhancement Program for Bipolar Disorder. Bipolar Disord 2007; 9:262-273 [PMID: 17430301 DOI: 10.1111/j.1399-5618.2007.00365.x]

60. Reinares M, Vieta E, Colom F, Martínez-Arán A, Torrent C, Comes M, Goikolea JM, Benabarre A, Daban C, Sánchez- Moreno J. What really matters to bipolar patients' caregivers: sources of family burden. J Affect Disord 2006; 94: 157-163[PMID: 16737741 DOI: 10.1016/j.jad.2006.04.022]

61. Dore G, Romans SE. Impact of bipolar affective disorder on family and partners. J Affect Disord 2001; 67: 147-158 [PMID:11869762 DOI: 10.1016/S0165-0327(01)00450-5]

62. Heru AM, Ryan CE. Burden, reward and family functioning of caregivers for relatives with mood disorders: 1-year follow-up. J Affect Disord 2004; 83: 221-225 [PMID: 15555717 DOI: 10.1016/j.jad.2004.04.013]

63. Ogilvie AD, Morant N, Goodwin GM. The burden on informal caregivers of people with bipolar disorder. Bipolar Disord 2005; 7 Suppl 1: 25-32 [PMID: 15762866 DOI: 10.1111/j.1399-5618.2005.00191.x]

64. Ostacher MJ, Nierenberg AA, Iosifescu DV, Eidelman P, Lund HG, Ametrano RM, Kaczynski R, Calabrese J, Miklowitz DJ, Sachs GS, Perlick DA. Correlates of subjective and objective burden among caregivers of patients with bipolar disorder.Acta Psychiatr Scand 2008; 118: 49-56 [PMID: 18582347 DOI: 10.1111/j.1600-0447.2008.01201.x]

65. Janowsky DS, Leff M, Epstein RS. Playing the manic game. Arch Gen Psychiatry 1970;22:252-261.

66. Brodie HKH, Leff MJ. Bipolar depression. A comparative study of patient characteristics. Am J Psychiatry 1971;127:1086-1090.

67. Winokur G, Morrison J, Clanecy J, et al. The Iowa 500. Arch Gen Psychiatry 27:462-464.

68. Carlson GA, Kotin J, Davenport YB. Follow-up of 53 bipolar manic-depressive patients. Br J Psychiatry 1974; 124: 134-139.

69.Mac Vane JR Jr, Lange JD, Brown WA. Psychological functioning of bipolar manic-depressive in remission. Arch Gen Psychiatry 1978;35:1351-1354.

70.Targum SD, Dibble ED, Davenport YB, Gershon E.S. The Family Attitudes Questionnaire Patients' and Spouses views of bipolar Illness. Arch Gen Psychiatry 1981;38:562-568.

71.Fadden G, Bebbington P, Kuipers L. Caring and Its Burdens A Study of the Spouses of Depressed patients. Br J Psychiatry 1987;151:660-667.

72.Creer C, Wing JK. Schizophrenia at home. Surbiton: National Schizophrenia Fellowship.1974.

73.Chakrabarthi S, Raj L, Kulhara P, Avasthi A, Verma S.K. Comparison of the extent and pattern of family burden in affective disorders and schizophrenia. Indian J Psychiatry 1995; 37:105-112.

74.Mueser KT, Webb C, Pfeiffer M, Gladis M, Levinson DF. Family burden of schizophrenia and bipolar disorder: perceptions of relatives and professionals. Psychiatric Services 1996; 47:507-511.

75.Perlick D, Clarkin JF, Sirey J, Raue P, Greenfield S, Struening E et al. Burden experienced by care-givers of person with bipolar affective disorder. Br J Psychiatry 1999;175:56- 62.

76.Hirschfeld R, Lewis L, Vornik LA. Perception and Impact of bipolar disorders how far have we really come? Results of the National Depressive and Manic- Depressive association 2000 survey of Individuals with bipolar disorder. J Clin Psychiatry 2003; 64:161-174.

77.Wang P, Kessler RC. Global Burden of Mood Disorders. Text Book of Mood disorder. 2006, p 55-67.

78.Kessler RC, Foster CL, Saunders WB. Social consequences of psychiatric disorders, I: educational attainment. Am J Psychiatry 1995;152:1026-1032.

79.Zwerling C, Whitten PS, Sprince NL. Workforce participation by persons with disabilities: the National Health Interview survey Disability Supplement, 1994 to 1995 J Occup Environ Med 2002;44:358-364.

80. Zergaw A, Hailemariam D, Alem A, Kebede D. A longitudinal comparative analysis of economic and family caregiver burden due to bipolar disorder. Bipolar disord 2008; 11(3):191-198191-198.

81. Bloom BL. Stressful life event theory and research: Implications for primary prevention: US Department of Health and Human Services, Public Health Service, Alcohol, Drug Abuse, and Mental Health Administration, National Institute of Mental Health; 1985.
82. Minuchin S, Minuchin S. Families and family therapy: Harvard University Press; 1974.
83. de Barbaro B. Wprowadzenie do systemowego rozumienia rodziny. Kraków: Wydawnictwo Uniwersytetu Jagiellońskiego; 1999.
84. Chadda RK, Singh TB, Ganguly KK. Caregiver burden and coping: a prospective study of relationship between burden and coping in caregivers of patients with schizophrenia and bipolar affective disorder. Soc Psychiatry Psychiatr Epidemiol. 2007; 42(11): 923–930. Epub 2007/08/19.
85. Miller ML, Omens RS, Delvadia R. Dimensions of social competence: Personality and coping style correlates. Personality and Individual Differences. 1991; 12(9): 955–964.
86. Chakrabarti S, Gill S. Coping and its correlates among caregivers of patients with bipolar disorder: a preliminary study. Bipolar Disord. 2002; 4(1): 50–60. Epub 2002/06/06.
87. Moller-Leimkuhler AM. Burden of relatives and predictors of burden. Baseline results from the Munich 5-year-follow-up study on relatives of first hospitalized patients with schizophrenia or depression. Eur Arch Psychiatry Clin Neurosci. 2005; 255(4): 223–231. Epub 2004/11/19.
88. Ostman M, Hansson L. The relationship between coping strategies and family burden among relatives of admitted psychiatric patients. Scand J Caring Sci. 2001; 15(2): 159–164. Epub 2002/06/25.The affective disorder-related burden imposed on the family environment 643
89. Wendel JS, Miklowitz DJ, Richards JA, George EL. Expressed emotion and attributions in the relatives of bipolar patients: an analysis of problem-solving interactions. J Abnorm Psychol. 2000; 109(4): 792–796. Epub 2001/02/24.
90. McCare, O. Situational determinants of coping responses: Loss, threat and challenge. Journal of Personality and Social Psychology1984; 46: 919-928.
91. Gidron, R. Stress and coping patterns in parents of the mentally ill in Israel international social work1991; 34: 159-170.

92. Budd, R.J., Oles, G., Hughes, I.C.T. The relationship between coping style and burden in carers of relatives with schizophrenia. Acta Psychiatrica Scandinavica1998; 98: 304-309.

93. Magliano, L., Fadden, G., Economou, M., Held, T., Xavier, M., Guarneri, M., Marasco, C., Tosini, P., & Maj, M. Family burden and coping strategies in schizophrenia: 1-year follow up data from the BIOMED 1 study. Social Psychiatry and Psychiatric Ep Holahan, C.J., Moos, R.H., & Bonin, L. Social support, coping, and psychological adjustment: A resource model. In G.R. Pierce, B. Lakey, I.G. Sarason, & B.R. Sarason (Eds.), Sourcebook of social support and personality. New York: Plenum Press.1997

94. Thara, R., Padmavati, R. Kumar, S.& Srinivasan, L. Burden assessment schedule: instrument to assess burden on caregivers of chronic mentally ill. Indian Journal of Psychiatry1998; 40: 21-29.

95.Gisella Rose (1996) .Effects of a health examination programme on quality of life and subjective well-being Scand J Public Health June 1996 vol. 24 no.2 124-131

96. Carver CS. You want to measure coping but your protocol's too long: consider the brief COPE. Int J Behav Med. 1997;4:92–100. doi: 10.1207/ s15327558ijbm0401_6.

97. Chakrabarti, S., Raj, L., Kulhara, P., Avasthi, A., & Verma, S.K. Comparison of the extent and pattern of family burden in affective disorders and schizophrenia. Indian journal of psychiatry1995; 37: 105-112.

98. Roychoudhuri, J., Mondal, D., Boral, A., & Bhattacharya, A. Family burden among long term psychiatric patients. Indian Journal of Psychiatry1995; 37: 81-85.

99.Marimuthu, C., Prashanth, N.R., John, J.K. & Russell, P. Mental health of primary caregivers: Indian Journal of psychiatry2000; 42: 46.

100. St. Onge.M., & Lavoie.F. . The experience of caregiving among mothers of adults suffering from psychotic disorders: factors associated with their psychological distress. American Journal of Community Psychology 1997; 25: 73 – 94.

101. Noh, S., & Avison, W.R. Living with psychiatric patients: Implications for the mental health of family members. Social Science and Medicine1988; 25: 263-271.

ANNEXURE- A

தகவல் அறிந்து ஆய்வில் பங்கேற்பதற்கான ஒப்பந்தம்

நான் மனவருத்தம் மற்றும் மனஎழுச்சி நோயால் பாதிக்கப்பட்டவர்களை உடனிருந்து கவனிப்பவர்களது குடும்பச்சுமை , சூழ்நிலையை சமாளிக்கும் திறன் மற்றும் அவர்களது மனஆரோக்கியம் பற்றி அறிவதற்கான ஆய்வில் ஈடுபட்டுள்ளேன்.

எனது பட்டப் படிப்பின் ஒரு பகுதியாக எனது துறை பேராசிரியரின் வழிகாட்டுதலின் பேரில் தஞ்சை மருத்துவ கல்லூரி மருத்துவ மனையில் இந்த ஆய்வை மேற்கொள்கிறேன்.

இந்த ஆய்விற்காக உங்களிடம் கேள்விகள் கேட்கப்படும்.அதில் நீங்கள் தரும் பதில் ஆய்விற்காக மட்டும் பயன்படுத்திக் கொள்ளப்படும்.உங்கள் பதில்கள் இரகசியமாகப் பாதுகாக்கப்படும் என்பதை தெரிவித்துக் கொள்கிறோம்.இந்த ஆய்வினால் உங்களுக்கு எந்த தீங்கும் ஏற்படாது.நீங்கள் இந்த ஆய்விற்கு எந்த நேரத்திலும் பங்கு கொள்ளாமல் விலகிக்கொள்ளலாம்.

ஆய்வாளரின் கையொப்பம் ஆய்வுக்குட்படுபவரின் கையொப்பம்

தேதி: தேதி:

முகவரி:

ANNEXURE- A

INFORMED CONSENT

I. Mr. / Mrs. / Ms. ..... hereby voluntarily agree to

participate in the study on **"A DESCRIPTIVE STUDY OF FAMILY BURDEN,COPING SKILLS AND PSYCHOLOGICAL WELL BEING AMONG CAREGIVERS OF PATIENTS WITH BIPOLAR DISORDER"**

The study is being carried out to understand the ways in which one copes with the stress of caring for a mentally ill relative and about subjective well-being. It will be carried out in a single session of 45 to 60 mints duration. I understand that I have the option to withdraw from the study at any point if I wish to do so.

I understand that the information I provide will be kept strictly confidential and that I will have no direct benefits from participation in the study. I know that I can contact the investigator for any further queries that I may have.

Signature of investigator Signature of participant

Date :

ANNEXURE - B

PATIENT SOCIODEMOGRAPHIC DATA SHEET AND

CLINICAL DATA SHEET

NAME……

AGE: ……years

SEX:

1) Male 2) Female

RELIGION

1. Hindu 2. Muslim 3.christian 4. Others

EDUCATION:

1. Illiterate 2. Primary (up to 5^{th}) 3. Middle group (up to 8^{th})

4. Up to HSC 5. Diploma 6. Graduate/Post Graduate 7.Professor/honors

OCCUPATION:

1. Unemployed 2. Unskilled worker 3. Semi-skilled worker 4. skilled worker 5)Clerical/Shop owner/ Farmer 6)Semi- profession 7)Profession

INCOME :…….. (Rupees per month)

Marital status:

1.Never married 2. Married 3. Divorced / Separated 4. Widow | Widower

Number of Children: …….. (Specify Number)

Current living arrangement:

1. Joint family 2. Nuclear family 3. Alone 4. With friends 5. Any other

Area of Residence:1. Rural 2. Urban

Diagnosis:

Duration of Illness:

ANNEXURE - C

CAREGIVERS SOCIODEMOGRAPHIC DATA SHEET AND CLINICAL DATA SHEET

NAME……

AGE: ……years

SEX:

1) Male 2) Female

RELIGION

1. Hindu 2. Muslim 3.christian 4. Others

EDUCATION:

1. Illiterate 2. Primary (up to 5^{th}) 3. Middle group (up to 8^{th})

4. Up to HSC 5. Diploma 6. Graduate/Post Graduate

7. Professor/honors

OCCUPATION:

1. Unemployed 2. Unskilled worker 3. Semi-skilled worker 4. skilled worker 5)Clerical/Shop owner/ Farmer 6)Semi- profession 7)Profession

INCOME :…….. (Rupees per month)

Marital status:

1.Never married 2. Married 3. Divorced / Separated 4. Widow / Widower

RELATIONSHIP TO PATIENT:

1. Mother 2. Father 3.Sister/brother 4.spouse 5.Son/daughter 6. Any other specify

DURATION OF MARRIAGE: ……years

(in case of spouse caregivers)

KNOWLEDGE OF ILLNESS:

1.Yes 2) No

(if onset of illness in the spouse was prior to marriage)

DURATION OF CARE: ……year

Number of Children: …….. (Specify Number)

Current living arrangement:

1. Joint family 2. Nuclear family 3. Alone 4. With friends 5. Any other

Area of Residence:1. Rural 2. Urban

Diagnosis (current episode):

Duration of Illness:

Duration of care:

ANNEXURE - D

BURDEN ASSESSMENT SCHEDULE

NAA -Not at all

TSE - To some extent

VM - Very much

Sl.No	*Item No.	Questions	NAA	TSE	VM
I. Spouse Related					
1.	17	Does your spouse help with family responsibility?	3	2	1
2.	18	Is your spouse able to satisfy your sexual needs?	3	2	1
3.	19	Is your spouse still affectionate towards you?	1	2	3
4.	20	Has the quality of your marital relationship declined since your spouse's illness?	1	2	3
5.	40	Are you satisfied with the amount of help that you are getting from health professionals regarding your relatives illness	3	2	1
Sub scale score:					
II. Physical and Health					
6.	21	Does caring for the patient make you feel easily tired and exhausted?	1	2	3
7.	22	Has your work load increased after the patient's illness?	1	2	3
8.	23	Do you think that your health has been affected because of the patient's illness?	1	2	3
9.	26	Do you sometimes feel depressed and anxious because of the patient?	1	2	3
33	33	Have your started feeling lonely and isolated since the patient's illness?	1	2	3
11.	37	Do you often feel frustrated that the improvement of the patient is slow?	1	2	3
Sub scale score:					
III. External Support					

12.	11	Does Support from your family help in caring for the patient?	3	2	1
13.	15	Do you think that your family appreciates the way you handle the patient?	3	2	1
14.	13	Are you able to care for others in your family?	3	2	1
15.	36	Do you feel that your friends appreciate the way you handle the patient?	3	2	1
16.	39	Do you have the feeling that your relative understands and appreciates your effort to help him/her?	3	2	1
Sub scale score					
IV. Care giver's Routines					
17.	7	Does the patient's illness affect your efficiency at work (at home/at work place)?	1	2	3
18.	8	Are you satisfied with the way the patient look after himself?	3	2	1
19.	24	Do you find time to look after your health?	3	2	1
20.	25	Are you able to relax for some time during the day?	3	2	1
21.	31	Has your sleep been affected since the patient took ill?	1	2	3
Sub scale score:					
V. Support of Patient					
22.	1	Is the current financial position adequate to look after the patient?	3	2	1
23.	4	Has your family's financial situation worsened since the patient's illness?	1	2	3
24.	6	Do you feel forced into going to work to support the patent?	1	2	3
25.	29	Does reducing the time spent with the patient (work/other activities) help you?	3	2	1
Sub scale score					
VI. Taking responsibility					
26.	2	Are you concerned that you are largely responsible to meet the patient's financial need?	1	2	3
27.	3	Does the patient's future financial situation worry you?	1	2	3
28.	9	Do you feel you have to take the responsibility of ensuring that the patient has everything he needs?	1	2	3
29.	35	Does sharing your problems with others make you feel better	3	2	1

Sub scale score					
VII. Other Relations					
30.	14	Has your family stability been disrupted by your relative's illness (frequent quarrels, break-up)	1	2	3
31.	16	Does the patient's illness prevent you from having satisfying relationship with the rest of your family?	1	2	3
32.	32	Does you relative's illness prevent you from having satisfying relationships with the friends?	1	2	3
Sub scale score					
VIII. Patient's Behavior					
33.	5	Is the patient's illness preventing you from looking for a job?	1	2	3
34.	12	Does the patient cause disturbance in the home?	1	2	3
35.	27	Do you sometimes feel that there is no solution to you problems?	1	2	3
36.	30	Does the patient's unpredictable behavior disturb you?	1	2	3
Sub scale score					
IX. Care givers Strategy					
37.	10	Do you think you have to compensate the patient's short comings, in general?	1	2	3
38.	28	Do you feel sometimes the need for temporary separation from the patient?	1	2	3
39.	34	Does support from friends help in caring for the patient?	3	2	1
40.	38	Do you feel that you are doing more than the patient to improve his/her situation?	1	2	3

ANNEXURE - E

PSYCHOLOGICAL WELL BEING INDEX

ANXIETY

5. Have you been bothered by nervousness or your "nerves"during the past month?

Extremely so - to the point where I could not work or take care of things 0

Very much so 1

Quite a bit 2

Some - enough to bother me 3

A little 4

Not at all 5

8. Were you generally tense or did you feel any tension during the past month?

Yes - extremely tense, most or all of the time 0

Yes - very tense most of the time 1

Not generally tense, but did feel fairly tense several times 2

I felt a little tense a few times 3

My general tension level was quite low 4

I never felt tense or any tension at all 5

17. Have you been anxious, worried, or upset during the past month?

Extremely so - to the point of being sick or almost sick 0

Very much so 1

Quite a bit 2

Some - enough to bother me 3

A little bit 4

Not at all 5

19. Did you feel relaxed, at ease or high strung, tight, or keyed up during the past month?

Felt relaxed and at ease the whole month	5
Felt relaxed and at ease most of the time	4
Generally felt relaxed but at times felt fairly high strung	3
Generally felt high strung but at times felt fairly relaxed	2
Felt high strung, tight, or keyed-up most of the time	1
Felt high strung, tight, or keyed-up the whole month	0

22. Have you been under or felt you were under any strain, stress, or pressure during the past month?

Yes - almost more than I could bear or stand	0
Yes - quite a bit of pressure	1
Yes, some - more than usual	2
Yes, some - but about usual	3
Yes - a little	4
Not at all	5

DEPRESSED MOOD

3. Did you feel depressed during the past month?

Yes - to the point that I felt like taking my life	0
Yes - to the point that I did not care about anything	1
Yes - very depressed almost every day	2
Yes - quite depressed several times	3
Yes - a little depressed now and then	4
No - never felt depressed at all	5

7. I felt downhearted and blue during the past month.

None of the time	5
A little of the time	4
Some of the time	3
A good bit of the time	2
Most of the time	1
All of the time	0

11. Have you felt so sad, discouraged, hopeless, or had so many problems that you wondered if anything was worthwhile during the past month?

Extremely so - to the point that I have just about given up	0
Very much so	1
Quite a bit	2
Some - enough to bother me	3
A little bit	4
Not at all	5

POSITIVE WELL-BEING

1. How have you been feeling in general during the past month?

In excellent spirits	5
In very good spirits	4
In good spirits mostly	3
I have been up and down in spirits a lot	2
In very low spirits	0

9. How happy, satisfied, or pleased have you been with your personal life during the past month?

Extremely happy - could not have been more satisfied or pleased	5
Very happy most of the time	4
Generally satisfied - pleased	3
Sometimes fairly happy, sometimes fairly unhappy	2
Generally dissatisfied or unhappy	1
Very dissatisfied or unhappy most or all the time	0

15. My daily life was full of things that were interesting to me during the past month.

None of the time	0
A little of the time	1
Some of the time	2
A good bit of the time	3
Most of the time	4
All of the time	5

20. I felt cheerful, light hearted during the past month.

None of the time	0
A little of the time	1
Some of the time	2
A good bit of the time	3
Most of the time	4
All of the time	5

SELF-CONTROL

4. Have you been in firm control of your behavior, thoughts, emotions or feelings during the past Month?

Yes, definitely so	5
Yes, for the most part	4
Generally so	3
Not too well	2
No, and I am somewhat disturbed	1
No, and I am very disturbed	0

14. Have you had any reason to wonder if you were losing your mind, or losing control over the way you act, talk, think, feel of your memory during the past month?

Not at all	5
Only a little	4
Some - but not enough to be concerned or worried about	3
Some and I have been a little concerned	2
Some and I am quite concerned	1
Yes, very much so and I am very concerned	0

18. I was emotionally stable and sure of myself during the past month.

None of the time	0
A little of the time	1
Some of the time	2
A good bit of the time	3
Most of the time	4
All of the time	5

GENERAL HEALTH

2. How often were you bothered by any illness, bodily disorder, aches or pains during the past month?

Every day	0
Almost every day	1
About half of the time	2
Now and then, but less than half the time	3
Rarely	4
None of the time	5

10. Did you feel healthy enough to carry out the things you like to do or had to do during the past month?

Yes - definitely so	5
For the most part	4
Health problems limited me in some important ways	3
I was only healthy enough to take care of myself	2
I needed some help in taking care of myself	1
I needed someone to help me with most or all of the things I had to do	0

13. Have you been concerned, worried, or had any fears about your health during the past month?

Extremely so	0
Very much so	1
Quite a bit	2
Some, but not a lot	3
Practically never	4
Not at all	5

VITALITY

6. How much energy, pep, or vitality did you have or feel during the past month?

Very full of energy - lots of pep	5
Fairly energetic most of the time	4
My energy level varied quite a bit	3
Generally low in energy or pep	2
Very low in energy or pep most of the time	1
No energy or pep at all - I felt drained, sapped	0

12. I woke up feeling fresh and rested during the past month

None of the time	0
A little of the time.	1
Some of the time	2
A good bit of the time	3
Most of the time	4
All of the time	5

16. Did you feel active, vigorous, or dull, sluggish during the past month?

Very active, vigorous every day.	5
Mostly active, vigorous - never really dull, sluggish	4
Fairly active, vigorous - seldom dull, sluggish	3
Fairly dull, sluggish - seldom active, vigorous	2
Mostly dull, sluggish - never really active, vigorous	1
Very dull, sluggish every day	0

21. I felt tired, worn out, used up, or exhausted during the past month.

None of the time	5
A little of the time	4
Some of the time	3
A good bit of the time	2
Most of the time	1
All of the time	0

ANNEXURE - F

BRIEF COPE SCALE

I. SELF – DISTRACTION

1. I've been turning to work or other activities to take my mind off things.

1 = I haven't been doing this at all 2 = I've been doing this a little bit

3 = I've been doing this a medium amount 4 = I've been doing this a lot

19. I've been doing something to think about it less, such as going to movies, watching TV reading, daydreaming, sleeping, or shopping.

1 = I haven't been doing this at all 2 = I've been doing this a little bit

3 = I've been doing this a medium 4 = I've been doing this a lot

II. ACTIVE COPING

2. I've been concentrating my efforts on doing something about the situation I'm in.

1 = I haven't been doing this at all 2 = I've been doing this a little bit

3 = I've been doing this a medium amount 4 = I've been doing this a lot

7. I've been taking action to try to make the situation better.

1 = I haven't been doing this at all 2 = I've been doing this a little bit

3 = I've been doing this a medium amount 4 = I've been doing this a lot

III. DENIAL

3. I've been saying to myself "this isn't real.".

1 = I haven't been doing this at all 2 = I've been doing this a little bit

3 = I've been doing this a medium amount 4 = I've been doing this a lot

8. I've been refusing to believe that it has happened.

1 = I haven't been doing this at all 2 = I've been doing this a little bit

3 = I've been doing this a medium amount 4 = I've been doing this a lot

IV. SUBSTANCE USE

4. I've been using alcohol or other drugs to make myself feel better.

1 = I haven't been doing this at all 2 = I've been doing this a little bit

3 = I've been doing this a medium amount 4 = I've been doing this a lot

11. I've been using alcohol or other drugs to help me get through it.

1 = I haven't been doing this at all 2 = I've been doing this a little bit

3 = I've been doing this a medium amount 4 = I've been doing this a lot

V. USE OF EMOTIONAL SUPPORT

5. I've been getting emotional support from others.

1 = I haven't been doing this at all 2 = I've been doing this a little bit

3 = I've been doing this a medium amount 4 = I've been doing this a lot

15. I've been getting comfort and understanding from someone.

1 = I haven't been doing this at all 2 = I've been doing this a little bit

3 = I've been doing this a medium amount 4 = I've been doing this a lot

VI. USE OF INSTRUMENTAL SUPPORT

10. I've been getting help and advice from other people.

1 = I haven't been doing this at all 2 = I've been doing this a little bit

3 = I've been doing this a medium amount 4 = I've been doing this a lot

23. I've been trying to get advice or help from other people about what to do.

1 = I haven't been doing this at all 2 = I've been doing this a little bit

3 = I've been doing this a medium amount 4 = I've been doing this a lot

VII. BEHAVIOURAL DISENGAGEMENT

6. I've been giving up trying to deal with it.

1 = I haven't been doing this at all 2 = I've been doing this a little bit

3 = I've been doing this a medium amount 4 = I've been doing this a lot

16. I've been giving up the attempt to cope.

1 = I haven't been doing this at all 2 = I've been doing this a little bit

3 = I've been doing this a medium amount 4 = I've been doing this a lot

VIII. VENTING

9. I've been saying things to let my unpleasant feelings escape.

1 = I haven't been doing this at all 2 = I've been doing this a little bit

3 = I've been doing this a medium amount 4 = I've been doing this a lot

21. I've been expressing my negative feelings

1 = I haven't been doing this at all 2 = I've been doing this a little bit

3 = I've been doing this a medium amount 4 = I've been doing this a lot

IX. POSITIVE REFRAMING

12. I've been trying to see it in a different light, to make it seem more positive.

1 = I haven't been doing this at all 2 = I've been doing this a little bit

3 = I've been doing this a medium amount 4 = I've been doing this a lot

17. I've been looking for something good in what is happening.

1 = I haven't been doing this at all 2 = I've been doing this a little bit

3 = I've been doing this a medium amount 4 = I've been doing this a lot

X. PLANNING

14. I've been trying to come up with a strategy about what to do.

1 = I haven't been doing this at all 2 = I've been doing this a little bit

3 = I've been doing this a medium amount 4 = I've been doing this a lot

25. I've been thinking hard about what steps to take.

1 = I haven't been doing this at all 2 = I've been doing this a little bit

3 = I've been doing this a medium amount 4 = I've been doing this a lot

XI. HUMOR

18. I've been making jokes about it.

1 = I haven't been doing this at all 2 = I've been doing this a little bit

3 = I've been doing this a medium amount 4 = I've been doing this a lot

28. I've been making fun of the situation.

1 = I haven't been doing this at all 2 = I've been doing this a little bit

3 = I've been doing this a medium amount 4 = I've been doing this a lot

XII. ACCEPTANCE

20. I've been accepting the reality of the fact that it has happened.

1 = I haven't been doing this at all 2 = I've been doing this a little bit

3 = I've been doing this a medium amount 4 = I've been doing this a lot

24. I've been learning to live with it.

1 = I haven't been doing this at all 2 = I've been doing this a little bit

3 = I've been doing this a medium amount 4 = I've been doing this a lot

XIII. RELIGION

22. I've been trying to find comfort in my religion or spiritual beliefs.

1 = I haven't been doing this at all 2 = I've been doing this a little bit

3 = I've been doing this a medium amount 4 = I've been doing this a lot

27. I've been praying or meditating.

1 = I haven't been doing this at all 2 = I've been doing this a little bit

3 = I've been doing this a medium amount 4 = I've been doing this a lot

XIV SELF-BLAME

13. I've been criticizing myself.

1 = I haven't been doing this at all 2 = I've been doing this a little bit

3 = I've been doing this a medium amount 4 = I've been doing this a lot

26. I've been blaming myself for things that happened.

1 = I haven't been doing this at all 2 = I've been doing this a little bit

3 = I've been doing this a medium amount 4 = I've been doing this a lot

S.no	Name	Age	Sex	Religion	Education	Occupation	Income	S-E scale	Relationship to the patient	Duration of marriage(in case of spouse)	Residence	Duration of care	patient name	patient marital status
1.	DHAKSHINAMOORTHY	56	M	1	1	2	1	5	2	-	2	1	SUNDARAMOORTHY	1
2.	SINGARAM	56	M	1	1	2	2	4	4	5	2	1	MAHALAKSHMI	
3.	MAHALINGAM	65	M	1	1	2	2	4	4	6	2	5	NEELAVATHY	
4.	KAVITHA	20	F	1	4	3	2	4	5	-	2	1	TAMILSELVI	4
5.	GOPAL	44	M	1	3	5	2	4	3	-	2	1	VEERAMANI	3
6.	SARITHA	25	F	1	3	2	1	5	4	1	2	1	SUBRAMANIYAN	
7.	PALANIVEL	64	M	1	3	2	2	4	2	-	2	1	KRISNAMOORTHY	1
8.	MURALITHARAN	40	M	1	4	3	2	4	4	3	1	1	PADMA	
9.	LATHA	34	F	1	3	1	-	5	4	3	2	1	PALANI	
10.	AARAVALLI	38	F	1	3	2	2	4	4	3	2	2	MURALI	
11.	NEELAMEHAM	57	M	1	1	5	2	4	2	-	2	1	KASINATHAN	3
12.	JEYARAMAN	25	M	1	4	2	2	4	3		2	1	RAJESHWARAN	1
13.	SELVI	42	F	1	2	2	1	5	1		1	1	KOKILA	1
14.	GOPI	30	M	1	4	5	2	3	4	2	2	1	PARAMESWARI	
15.	KUMAR	45	M	1	1	5	2	4	4	3	2	2	KASTHURI	
16.	SELVARAJ	48	M	1	1	5	2	4	2		2	1	VETRIVEL	1
17.	MARIYADAS	53	M	2	4	5	3	3	4	4	2	3	AROKIYAMARY	
18.	PANDIYAMMAL	41	F	1	4	3	2	4	4	3	2	2	GUNASEKARAN	
19.	SEVAN	65	M	1	1	5	2	4	2		2	4	PRABHAKARAN	1
2O.	KUMAR	58	M	1	3	4	2	4	2		2	3	SURESH	3
21.	MALARKODI	42	F	1	4	-	-	5	4	3	2	2	SOMASUNDARAM	
22.	CHINNADURAI	55	M	1	2	2	1	4	2		2	2	JEYA	1
23.	KALIYAMOORTHI	60	M	1	1	5	2	4	2		2	1	THIRUMURUGAN	1
24.	RAJI	34	F	1	2	2	2	4	4	5	2	4	PANNEERSELVAM	
25.	PAULRAJ	42	M	1	4	2	2	4	4	4	2	1	MANJULA	
26.	CHINNAPONNU	70	F	1	1	2	2	5	1		2	5	RAVICHANDRAN	4
27.	MURUGESAN	35	M	1	6	6	4	2	5		2	2	KALYANAM	4
28.	RAJATHI	51	F	1	1	2	1	5	4	6	2	3	NATARAJAN	
29.	JEYAPERUMAL	52	M	1	3	5	2	4	4	5	2	4	AYEEYAMMAL	

S.no	Name	Age	Sex	Religion	Education	Occupation	Income	S-E scale	Relationship to the patient	Duration of marriage(in case of spouse)	Residence	Duration of care	patient name	patient marital status
30.	KALAISELVI	39	F	1	3	2	1	4	4	4	2	4	GANESAN	
31.	ABDHUL JAFFER	58	M	3	4	5	3	3	2		2	1	JAFFER SHADHIK	1
32.	LAKSHMI NARAYANAN	40	M	1	2	2	2	4	4	2	2	2	KAVITHA	
33.	SANGEETHA	29	F	1	3	-	-	5	4	2	2	1	VETRIVEL	
34.	SELVI	48	F	1	1	2	1	5	4	5	2	4	LAKSHMANAN	
35.	RAVICHANDRAN	48	M	1	3	2	2	4	2		2	1	RAMKUMAR	1
36.	AYYASAMY	58	M	1	1	5	2	4	2		2	2	VELU	1
37.	RAMASAMY	34	M	1	4	2	2	4	4	2	2	1	DEVI	
38.	MOHANDOSS	42	M	1	6	6	10	2	4	3	2	3	PUSBHALATHA	
39.	RANI	32	F	1	2	-	-	5	4	3	2	3	RAVI	
40.	KAMARAJ	54	M	1	3	5	2	4	4	4	2	1	SELVI	
41.	JAYA	40	F	1	1	2	1	5	4	5	2	1	RAMU	
42.	KARUPAIYAN	49	M	1	1	5	1	4	4	5	2	4	RAJALAKSHMI	
43.	MAIVAZHIARUMUGA NAYAKKAR	58	M	1	1	5	2	4	2		2	3	SALAI THANIGAI MALAI	1
44.	SAKUNTHALA DEVI	38	F	1	1	-	-	5	4	5	2	5	MURUGAN	
45.	MALA	20	F	1	4	2	2	4	5		2	1	MALLIGA	4
46.	SELVAM	32	M	1	4	5	2	4	5		2	4	KATHAYEE	4
47.	VENKATRAMAN	50	M	1	4	5	2	3	4	4	2	1	NAGALAKSHMI	
48.	SETHURAMAN	52	M	1	3	5	2	4	4	6	2	5	JHOTHILAKSHMI	
49.	RENGASAMY	72	M	1	1	2	1	5	2		2	3	JEYALAKSHMI	3
50.	LAKSHMI	51	F	1	1	2	1	5	4	6	2	6	RADHAKRISHNAN	
51.	PANCHANATHAN	55	M	1	1	5	2	4	2		2	1	PATCHIMUTHU	1
52.	THANALAKSHMI	55	F	1	1	2	2	5	4	7	2	3	SACHITHANANDHAM	

			BURDEN ASSESSMENT SCHEDULE									PSYCHOLOGICAL GENERAL WELL BEING INDEX						
S. No	Name	I	II	III	IV	V	VI	VII	VIII	IX	TOTAL	anxiety	depression	Positive well being	Self-control	General health	Vitality	Total
1.	DHAKSHINAMOORTHY	2	11	10	10	10	10	7	10	10	80	9	9	8	10	9	8	53
2.	SINGARAM	11	11	10	11	7	10	6	8	10	84	10	7	6	11	10	10	54
3.	MAHALINGAM	11	16	12	12	12	12	7	10	12	104	9	6	5	7	9	8	44
4.	KAVITHA	2	16	12	13	12	12	7	10	12	96	8	5	6	8	6	7	40
5.	GOPAL	3	15	10	10	8	8	8	9	8	79	12	8	6	9	8	10	53
6.	SARITHA	9	7	5	8	7	6	3	6	6	57	13	9	10	8	11	12	63
7.	PALANIVEL	2	17	12	13	12	12	9	11	10	98	10	7	6	7	9	8	47
8.	MURALITHARAN	9	15	11	11	11	12	7	7	9	92	11	8	5	7	10	8	49
9.	LATHA	9	11	10	10	8	11	6	8	7	80	12	8	7	9	10	9	55
10.	AARAVALLI	11	14	12	13	10	7	7	9	10	93	10	7	3	11	12	10	53
11.	NEELAMEHAM	2	12	9	12	9	12	7	9	10	82	11	7	8	9	9	8	52
12.	JEYARAMAN	2	13	12	12	11	12	6	10	11	89	9	8	7	9	10	12	55
13.	SELVI	2	15	12`	11	10	9	7	9	10	85	11	7	8	9	9	8	52
14.	GOPI	9	14	11	11	9	8	6	9	10	87	9	8	8	10	9	10	54
15.	KUMAR	10	12	12	13	12	10	8	12	10	99	9	6	7	8	8	7	45
16.	SELVARAJ	2	11	12	11	11	10	6	8	9	80	12	9	7	9	10	9	56
17.	MARIYADAS	9	12	11	9	8	11	9	10	8	87	9	8	8	10	9	10	54
18.	PANDIYAMMAL	10	12	11	9	9	11	9	11	9	91	11	8	5	7	10	8	49
19.	SEVAN	1	15	13	11	11	10	6	8	9	84	10	7	5	10	12	10	53
2O.	KUMAR	11	14	12	13	11	10	8	12	11	102	9	7	6	8	9	8	47
21.	MALARKODI	11	14	11	13	12	12	8	11	12	104	9	6	6	7	7	8	43
22.	CHINNADURAI	2	12	9	13	9	12	7	9	10	83	11	7	8	9	9	8	52
23.	KALIYAMOORTHI	2	15	12`	11	10	9	7	9	10	85	11	8	8	9	9	8	53
24.	RAJI	11	14	12	15	12	12	7	10	12	105	8	6	6	7	7	8	42
25.	PAULRAJ	9	13	11	12	10	8	6	9	10	88	9	8	8	9	8	9	51
26.	CHINNAPONNU	2	14	12	13	11	10	8	12	11	93	10	8	6	8	10	8	50
27.	MURUGESAN	2	15	12`	11	10	9	7	9	10	85	11	8	8	9	9	8	53

S.No	Name	I	II	III	IV	V	VI	VII	VIII	IX	TOTAL	anxiety	depression	Positive well being	Self-control	General health	Vitality	Total
28.	RAJATHI	11	13	11	12	10	12	6	10	10	95	12	8	9	7	8	9	53
29.	JEYAPERUMAL	9	14	12	13	12	10	8	12	12	102	9	6	7	7	8	9	46
30.	KALAISELVI	10	12	11	9	10	11	9	11	9	92	12	9	7	9	10	9	56
31.	ABDHUL JAFFER	2	10	7	8	8	10	4	9	8	66	12	9	10	8	11	12	62
32.	LAKSHMI NARAYANAN	9	7	5	8	7	6	3	6	6	57	13	10	10	8	11	12	64
33.	SANGEETHA	9	7	5	8	7	6	3	6	6	57	13	11	10	8	11	12	63
34.	SELVI	11	14	12	13	12	10	8	12	12	104	9	6	7	7	8	9	46
35.	RAVICHANDRAN	3	11	12	10	11	10	6	8	9	80	12	9	7	9	10	9	56
36.	AYYASAMY	2	13	12	10	11	10	7	8	9	82	11	9	9	8	9	9	55
37.	RAMASAMY	9	12	11	9	10	11	7	9	9	87	12	9	8	7	8	8	52
38.	MOHANDOSS	11	12	11	9	7	7	6	6	10	79	13	10	9	8	9	10	59
39.	RANI	2	14	11	9	9	11	9	11	10	92	10	9	7	9	9	9	54
40.	KAMARAJ	9	8	5	8	7	6	3	6	8	60	13	9	10	8	11	12	63
41.	JAYA	9	10	8	8	7	6	6	7	8	69	12	9	10	9	10	10	60
42.	KARUPAIYAN	10	14	12	13	12	10	8	12	12	103	9	7	7	8	8	9	48
43.	MAIVAZHIARUMUGA NAYAKKAR	3	11	12	10	11	10	6	8	9	80	11	9	7	10	9	10	56
44.	SAKUNTHALA DEVI	9	11	11	9	8	11	9	10	8	86	11	9	7	9	8	9	53
45.	MALA	2	10	10	12	9	10	4	9	8	74	13	9	10	10	11	12	65
46.	SELVAM	2	14	12	13	11	10	8	12	11	93	12	9	8	7	8	8	52
47.	VENKATRAMAN	9	12	11	9	10	11	7	9	9	87	12	9	8	9	8	8	54
48.	SETHURAMAN	11	14	12	13	11	10	9	12	11	102	9	6	7	7	8	9	46
49.	RENGASAMY	2	11	12	11	11	10	6	8	10	81	12	9	7	9	10	9	56
50.	LAKSHMI	13	14	12	13	12	10	9	12	11	106	8	6	6	7	7	7	41
51.	PANCHANATHAN	2	10	8	8	7	6	6	7	8	62	13	10	10	9	11	12	65
52.	THANALAKSHMI	9	11	12	11	10	10	6	8	9	86	12	9	8	7	8	8	52

S.No	Name	Brief cope scale													
		Self distraction	Active coping	Denial	Substance use	Use of ES	Use of IS	Behavioral disengagement	Venting	Positive reframing	planning	Humor	Acceptance	Religion	Self blame
1.	DHAKSHINAMOORTHY	4	5	2	4	2	4	2	6	5	5	2	7	6	2
2.	SINGARAM	6	6	2	6	3	4	2	5	5	6	2	6	5	3
3.	MAHALINGAM	6	5	3	6	3	5	6	5	5	6	2	7	4	2
4.	KAVITHA	5	6	4	2	6	5	5	4	4	5	2	5	6	2
5.	GOPAL	7	6	3	4	3	4	2	4	5	6	3	4	4	2
6.	SARITHA	5	5	6	2	5	6	4	6	4	4	2	6	6	2
7.	PALANIVEL	4	5	2	4	2	4	2	6	5	5	2	7	6	2
8.	MURALITHARAN	6	6	2	6	3	4	2	5	5	6	2	6	5	3
9.	LATHA	3	5	4	2	5	6	5	6	4	5	2	5	7	2
10.	AARAVALLI	4	6	3	2	4	4	3	4	3	4	2	4	4	2
11.	NEELAMEHAM	4	5	2	4	2	4	2	6	5	5	2	7	6	2
12.	JEYARAMAN	7	6	3	2	3	4	2	4	5	6	3	4	4	2
13.	SELVI	3	5	4	2	4	5	5	6	4	5	2	5	5	2
14.	GOPI	6	5	3	3	3	5	6	5	5	6	2	7	4	2
15.	KUMAR	5	6	2	4	2	4	5	3	4	5	2	6	2	2
16.	SELVARAJ	4	5	2	2	2	4	2	6	5	5	2	7	3	2
17.	MARIYADAS	4	5	2	4	2	4	2	6	5	5	2	7	8	2
18.	PANDIYAMMAL	3	5	6	2	5	6	4	6	4	4	2	6	8	2
19.	SEVAN	4	5	2	3	2	4	3	4	5	5	2	7	6	3
2O.	KUMAR	4	5	2	2	2	4	3	4	5	5	2	3	6	3
21.	MALARKODI	3	5	4	2	5	5	2	5	6	6	2	6	5	4
22.	CHINNADURAI	3	4	3	2	5	4	4	5	5	5	2	6	8	2
23.	KALIYAMOORTHI	3	4	3	3	5	4	4	5	5	5	2	6	4	2
24.	RAJI	6	5	5	2	4	5	2	6	3	4	2	5	5	3
25.	PAULRAJ	4	5	2	3	2	4	3	4	5	5	2	3	6	3
26.	CHINNAPONNU	4	5	2	2	2	4	2	6	5	5	2	7	6	2
27.	MURUGESAN	4	5	2	3	2	4	3	4	5	5	2	3	3	3
28.	RAJATHI	5	5	5	2	4	5	2	6	3	4	2	5	7	2
29.	JEYAPERUMAL	4	5	2	3	2	4	3	4	5	5	2	3	4	2

S.no	Name														
30.	KALAISELVI	3	5	4	2	5	5	2	5	6	4	2	6	6	3
31.	ABDHUL JAFFER	4	5	2	2	2	4	3	4	5	5	2	3	8	2
32.	LAKSHMI NARAYANAN	5	6	2	4	3	4	2	3	5	6	2	6	5	2
33.	SANGEETHA	4	5	5	2	5	4	3	5	5	4	2	5	4	2
34.	SELVI	5	5	5	2	5	4	3	5	5	4	2	5	5	2
35.	RAVICHANDRAN	4	3	4	2	2	5	3	4	4	5	2	4	4	3
36.	AYYASAMY	4	3	4	4	2	5	3	4	4	5	2	6	6	3
37.	RAMASAMY	5	6	2	6	3	4	2	3	5	4	3	5	4	2
38.	MOHANDOSS	5	4	5	2	5	4	3	5	5	4	2	5	5	2
39.	RANI	6	5	4	2	5	5	2	5	6	6	2	6	6	4
40.	KAMARAJ	4	5	2	3	2	4	3	4	5	5	2	3	4	2
41.	JAYA	3	5	4	2	5	5	2	5	6	6	2	6	5	4
42.	KARUPAIYAN	6	4	2	3	2	3	3	6	4	4	3	7	6	3
43.	MAIVAZHIARUMUGA NAYAKKAR	6	4	4	2	2	4	3	6	4	5	3	6	7	2
44.	SAKUNTHALA DEVI	3	5	4	2	5	5	2	5	6	6	2	6	6	2
45.	MALA	4	4	2	2	3	4	4	5	4	4	2	6	5	3
46.	SELVAM	5	5	3	3	2	3	3	4	5	5	3	5	5	2
47.	VENKATRAMAN	4	5	2	2	2	4	3	4	5	5	2	3	4	2
48.	SETHURAMAN	5	6	3	3	4	4	4	3	7	5	2	7	6	3
49.	RENGASAMY	4	5	2	4	2	4	2	6	5	5	2	7	4	2
50.	LAKSHMI	4	4	2	2	3	4	4	5	4	4	2	6	6	3
51.	PANCHANATHAN	4	5	2	2	2	4	2	6	5	5	2	5	4	2
52.	THANALAKSHMI	3	4	5	2	4	5	4	6	4	3	2	6	6	3